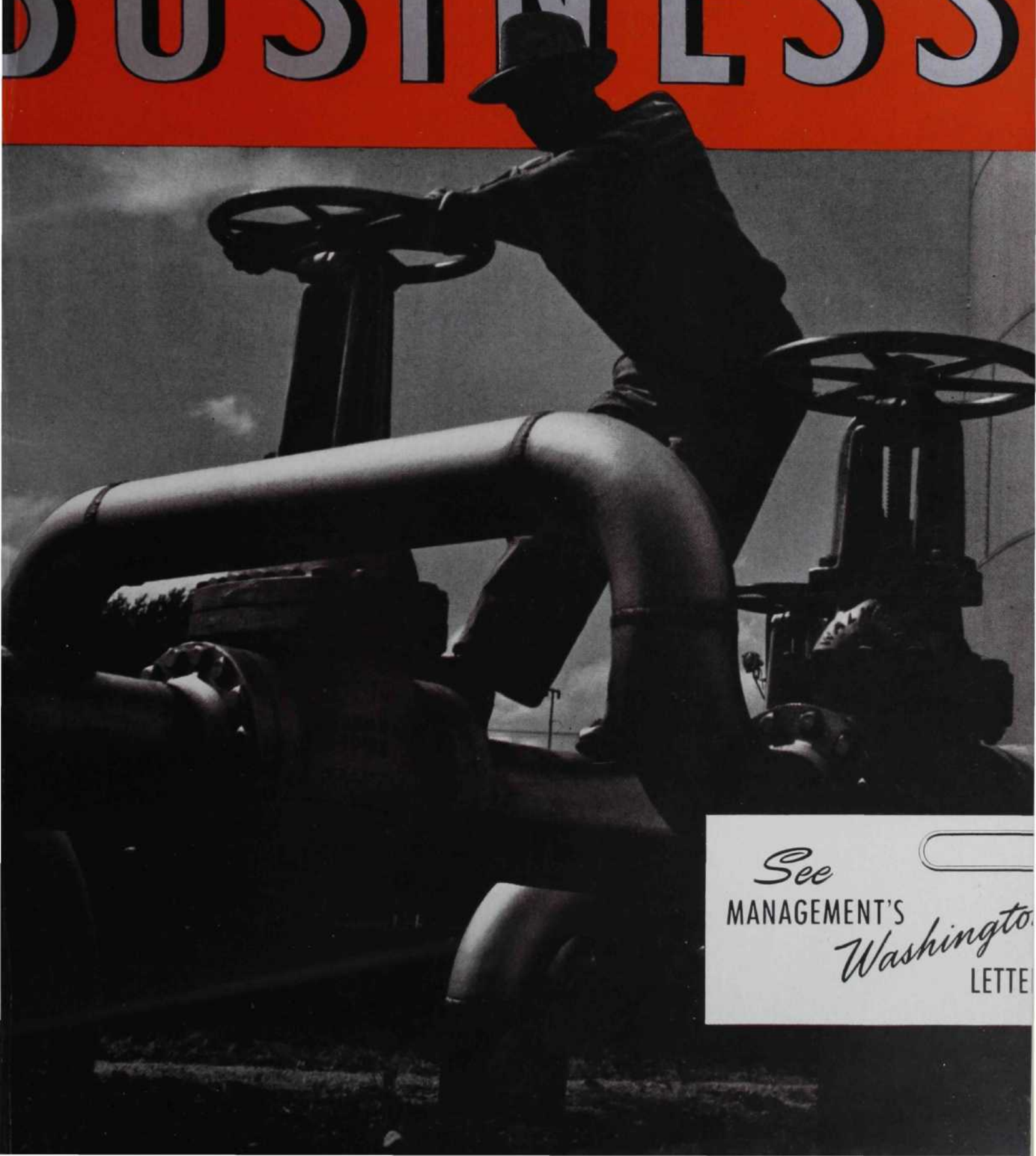


April

NATION'S

1943

# BUSINESS



*See*  
MANAGEMENT'S  
*Washington*  
LETTER







## Tires Made with B. F. Goodrich Synthetic Now Rolling on Army Trucks

*A typical example of B. F. Goodrich leadership in truck tires*

MANY a U. S. Army truck is rolling today on tires made with B. F. Goodrich synthetic rubber—Ameripol. Here man-made rubber is getting its final tests—tests no proving ground could ever match.

And big city buses in Chicago, New York, Boston, Cleveland, and other cities are now rolling on tires made with B. F. Goodrich synthetics, too.

This does not mean that synthetic rubber is plentiful. Only a fraction of the nation's requirements is being produced today. But it does mean that B. F. Goodrich, the only company


to offer tires made with synthetic rubber to the general public before the war, is still pioneering in this great development.

And it means that America will never again be entirely dependent upon foreign sources for its rubber supply. With peace, your truck and your car may have tires made wholly or partially of synthetic rubber. When that time comes remember that B. F. Good-

rich, 'way back in 1940, was first to offer tires of synthetic rubber for sale.







## ***They Speak a Language the Japs Understand***

### ***FIRE ONE! FIRE TWO!***

From the first day of this war, the crews of U. S. submarines have thus "reasoned" with the enemy—and in his own waters.

They know *action* and *engines*—for they literally live with and by the Diesels which take them there and bring them back.

Many of these Diesels are Fairbanks-Morse Diesels. We feel that nothing short of our level best is good enough for these men of the silent service.



# **FAIRBANKS, MORSE & CO.**





## "Good thing I was here"

Two-thirds of all Bell telephones are now dial. There would be more if the necessary materials weren't needed for war.

Today's rush of business couldn't be handled without dial telephones. They take care of more than 75,000,000 calls a day.

Even with millions of dial telephones in use, the number of operators increased more than 23,000 last year. The total number is now over 160,000.

BELL TELEPHONE SYSTEM





# 20,001 Businesses

**T**HE INTERNATIONAL HARVESTER COMPANY is a big business.

But it began in a one-room farm blacksmith shop, 112 years ago. Thousands of other American enterprises, from equally humble beginnings, have grown to national scope. That kind of growth has been typically American. We hope it will always be so.

Our company did not become a big business without receiving help from others and giving help to others. No American business does. For our American business system is like a town. A householder who earns his living by selling clothing will buy his groceries from one neighbor, his shoes from another, his coal from still another, his insurance and his newspapers from others. So any business depends upon many other businesses for things which it needs, but cannot or does not make itself.

Every business, like every householder, operates both as a buyer and as a seller.

## None Can Stand Alone

There is no business so big that it can operate without the help of other businesses. Indeed, the larger the business the more help it requires from others and the more help others receive from it.

International Harvester buys an almost infinite number of things from thousands of other companies, the vast majority of which are small businesses. We buy raw materials, supplies, finished and semi-finished parts and sub-assemblies, as well as services of all kinds. These companies which sell to us to fill our orders, buy in turn from many others.

Checking up, we have found that in the year before our country entered the war, we bought from more than 10,000 different businesses, most of them small. Our purchases during that year of 1941 amounted to just under \$200,000,000.

*During 1942, after we had entered on war production, we added almost 1,000 new companies to the list of those from whom we buy. During 1943 we will add more.*

## Teamwork of Infinite Variety

These businesses from which we buy are in every state of the Union. Some have been operating for a long time, others came into being to produce special products needed for the war. To help them help us get out more war production and get it out faster, we have given many of them engineering and manufacturing assistance, have helped some to enlarge their facilities.

Our war orders, in other words, have not excluded little business from war work, but *have very definitely brought more little businesses into war work.*

Nor do our relationships with small businesses end with those who sell us things for our production. The civilian products we manufacture are sold by our dealers in the United States, to farmers, motor truck operators, construction companies and other users. There are 10,000 independent merchants who comprise this group handling our products.

Just as we have tried to assist, where necessary, the smaller manufacturers who are associated with us in pro-

duction, so, too, we have tried to help our dealers maintain their position during the war, despite shortages of new machines to sell. We have helped them arrange their activities so that they may be able to operate successfully on the basis of selling service and service parts. We have procured and trained service mechanics for dealers, to replace those who have entered the armed services. We have halted the sale of new farm machines through our company's relatively few retail outlets and distributed that business among adjacent dealers so that they might have the maximum possible volume of sales.

To sum up, we are a customer of more than 10,000 different businesses, and we market our products through more than 10,000 other businesses.

Thus, in our operation on a national scale, 20,000 businesses look to us either as customers or as suppliers of merchandise.

We mention these facts about the relationship between our company and 20,000 smaller businesses because it has been said by some that big business has tried to take advantage of the war to drive little businesses out of existence. We believe the facts prove that the contrary is true.

## A CENTER for Responsibility

Our company has been assigned the responsibility for handling many large war orders of a type which must be handled by a large company in order to obtain the speedy production essential to the war program. Only a large company can handle orders of this kind and size—only a company with a large organization, experienced, versatile, accustomed to coordinating the facilities and abilities of many companies and able to direct this united effort for the production of new war products as rapidly as possible.

We have done our utmost to bring the maximum number of smaller companies into the filling of those orders. We need their help, they need ours. Through cooperation between us, war production is speeded up.

Having long adhered to a policy in support of small business, Harvester restates that policy in the light of present conditions:

*We want little business to survive the war. We recognize an obligation to do our share to see that it does. We know full well that big business can't survive without little business. The same economic forces that would strangle the one, would, in time, kill the other.*

We know that America's economy cannot be healthy, cannot provide employment for workers or good products at low prices for customers, unless small business, medium-sized business and big business are all functioning, each at the job it can do best.

America, after the war, will need them all.

*Fowler McCormick*  
President

INTERNATIONAL HARVESTER COMPANY, CHICAGO, ILLINOIS

# INTERNATIONAL HARVESTER





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Cover photo by R. I. Nesmith for The Texas Co.

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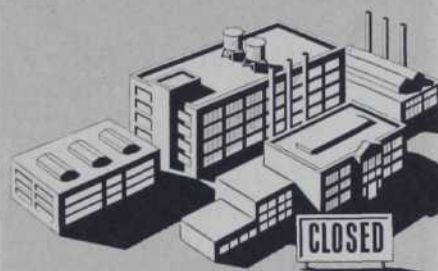
GENERAL OFFICE—Washington, U. S. Chamber Building.

BRANCH OFFICES—New York, 420 Lexington Ave.; San Francisco, 333 Pine Street; Dallas, 1101 Commerce St.; Chicago, First National Bank Building; Cleveland, Hanna Building.

As the official magazine of the Chamber of Commerce of the United States this publication carries authoritative notices and articles in regard to the activities of the Chamber; in all other respects the Chamber cannot be responsible for the contents thereof or for the opinions of writers.

Although the editors will make every effort to return unsolicited manuscripts promptly and in good condition, Nation's Business cannot accept responsibility for loss or damage of this material.

## FOR WANT OF A "Part" . . . A PLANT WAS CLOSED



EXCEPT for one difficult part, your new product or your present war production may be all set. Failure to procure that one part may block an otherwise successful program . . . might even close your plant!

If a problem of this type is bothering you . . . if it involves re-designing for use or production . . . if you are not fully equipped to make it . . . KAYDON can manufacture it for you, on a production basis, with unfailing precision and assured delivery.

## CONTACT KAYDON

The KAYDON organization welcomes such problems . . . is qualified to cooperate with your organization in putting your plans into action!

If the need for difficult parts is retarding your war production or development of your post-war products, KAYDON offers precision facilities plus a broad background of manufacturing and technical experience.

# THE KAYDON

## ENGINEERING CORP.

MCCRACKEN ST. MUSKEGON, MICH.





## JONES, PERRY, FARRAGUT...wired for sound!

In applying the newest electronic theories to the needs of war . . . communications, navigation and control devices, the U.S. Navy brings to the ancient art of sea fighting mystifying ultra-modern aids.

Basis of these new marvels is the electronic tube, similar to those in your radio. But so precise are some of these new tubes that they must be made in a dust-free atmosphere of low humidity. In building a new plant for the manufacture of these tubes, the Radio

Corporation of America is taking full advantage of York technical skill and experience in the field of industrial air conditioning.

Since the days of John Paul Jones, naval operations have depended on communications and York is proud of its part in today's amazingly complex task of getting the message through. York Ice Machinery Corporation, York, Pennsylvania.



# YORK REFRIGERATION AND AIR CONDITIONING FOR WAR

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885





## SOLUTION—

## “Snubbers” used to prevent exhaust noise

The exhaust “bark” from the average Diesel power plant is guaranteed to produce insomnia in sleepers nearby unless the engine exhausts at the plant are properly quieted. Therefore, muffler manufacturers used to build long, complicated devices which were intended to absorb the noise before it reached the end of the exhaust pipe. These so-called “silencers” had to be matched to certain pipe lengths in order to obtain quiet exhausts, and they sometimes caused lowered engine efficiency.

Burgess engineers set out to find the cause of exhaust noise. Their investigations led them to the discovery of the “snubbing principle” of preventing this noise, rather than muffling it. Burgess Snubbers, operating on this new principle, eliminate the source of exhaust noise so that the noise never occurs. And there is no interference with efficient engine operation.

BURGESS PIONEERING in acoustic development has produced many other quieting devices. Twenty-five years' experience has made it possible for the Acoustic Division to successfully engineer products ranging from acoustic telephone booths to ventilating duct linings. Why not write us of your noise difficulties? Acoustic Division engineers may already have the solution to your problem.

**BURGESS**  
*Acoustic*  
**DIVISION**

Acoustic Division, Burgess Battery Co., 2817-P W. Roscoe St., Chicago

# Through the Editor's Specs

## Light for our St. Pauls

A REVIVAL of official government interest in freedom of enterprise seems to be on. It began subsequent to the first Tuesday after the first Monday in November, 1942. Among the first to hit the saw-dust trail was Leon Henderson, who announced that his experience convinced him there is no satisfactory substitute for free enterprise.

Secretary of Labor Perkins followed Henderson, and then came Vice President Wallace, who went the whole way by saying specifically that, in the “new democracy,” there would be a place for everyone, including even businessmen.

The faith-in-free-enterprise theme has also been adopted by some of the most “liberal” newspaper columnists. Among these is Jay Franklin, who is now convinced, he says, that “free enterprise for private profit is essential to human liberty.” His conversion followed a futile attempt to send a birthday telegram to a member of his family. He couldn't do it, because the Government forbids such telegrams.

“Suppose,” said Mr. Franklin, “for example, after the war we were to adopt a Fascist system with government ownership of communications and basic industries. Suppose that such a government decided that every man, dollar and ounce of material that could be spared must go into a great national rehousing program and that, therefore, the inmates—I will not call them citizens—of the United States must not be allowed to send telegrams, make telephone calls or indulge in ‘pleasure driving.’”

## Realism in the grass roots

A LOCAL rationing board refused to follow O.P.A. orders to deny pleasure gasoline to men just about to leave home to enter military service.

“We know how the order reads,” said the local board, “but after all we've got to live with these people.”

We and other observers and critics of overcentralized controls over civilian life in war-time have commented in complicated words, in qualified phrases. It remained for this local group to tell simply the core of all such comment: We've got to live with these people. They are our

friends and neighbors. They are decent people, worried about the war, their wives, children, homes, and their futures. They distrust directives, alphabetical constabularies, and resent warnings in fine print that \$10,000 and jail are likely the best inducements to wring the truth from them.

This incident of neighborhood revolt is not small and it certainly is not funny, because there is nothing amusing when men and women feel that their nation at war is one thing and their public servants something else again.

## Overcoming a shortage

WAR TASKS undertaken by chambers of commerce are many and various. One of the most unusual we've come across is reported by the San Antonio *Evening News*. Mrs. O. D. Wallace of San Angelo, Texas, wrote a letter to the Jackson, Miss., Chamber of Commerce as follows:

“My son is a first-class cook in the Navy and has to have an alarm clock in his work. I walked this town over, but there is not one for any price. If you can get him one, send it C. O. D.”

The Jackson Chamber leaped into action, and Stanley Wallace, ship's cook at Norfolk, got his alarm clock—but not C. O. D.

## Conversion note

THERE ought to be a place for this in the record of war-born ingenuity: There's a shortage of the derbies used by trumpet players in dance bands to produce “wah-wah” effects. Mel Webster, Jr., an Army musician, looked around for substitutes; found them in the form of rejected Army helmet liners. The Selmer plant at Elkhart, Ind., is turning them out in volume, and they are said to be just as effective acoustically as the conventional derby.

## Home-front morale

IN OUR February issue, President Johnston of the U. S. Chamber of Commerce contributed an article outlining “Eight Ways to Speed Victory.” The response to Mr. Johnston's constructive proposals was enthusiastic and voluminous. One that gave us special pleasure came from



## APRIL—PERFECT SHIPPING AND CAREFUL HANDLING MONTH



**IT'S THE MEN  
WHO MAKE THE ERIE!**




## Taking Bad Pictures Is His Business!

**Y**OU wouldn't think a photographer could keep a job if he took bad pictures all the time, but we have a trained crew of ace cameramen who do just that.

They're on duty night and day checking freight shipments for errors and oversights in packing and loading that might result in damage or delay. They climb in box cars, peer over the sides of gondolas, circle flat cars. They get in anywhere and everywhere they think they may find a poor package, a split crate, or a broken carton. And when they do find such a condition, they photograph it and make suggestions on how to eliminate the danger in the future.

The net result is better shipping, less waste, and lower costs in the swift handling of mountains of war materials and essential civilian goods. And the services of these trained men, together with the advice and assistance of Erie's loading and packing specialists is available to any shipper—not only during April, which has been designated as perfect shipping month—but all year round without cost or obligation.



 **23,578** FREIGHT TRAINS DAILY  
 **1,408,964** FREIGHT CARS DAILY  
 **25,000,000** NET TONS DAILY

**AMERICAN RAILROADS AT WAR**

**THE RAILROAD OF HELPFUL SERVICE**

Mrs. Gordon Fuller of Rural Route 2, Anderson, Ind., who particularly liked Mr. Johnston's reference to the importance of small businesses.

"I run a filling station," said Mrs. Fuller. "My husband works in a war plant. I take care of and service hundreds of cars for men and women who also work in war plants. Today I picked up a copy of NATION'S BUSINESS and as a result, I have a feeling that I am doing something really worth while. Until now I was just running a dirty, greasy little filling station so my husband could buy more bonds and make the equipment which our fighting forces need."

"Some of the things which have happened since the war began made us feel as though we were such a small duck in such an enormous puddle that we should give up. It makes us feel good to know there are men who still think we are somewhat necessary. I assure you that as long as there is a NATION'S BUSINESS, I shall be one of its most ardent readers."

### Minute-man speech

FROM the *Congressional Record* of March 11 (The speaker is Congressman John E. Rankin, Mississippi Democrat and rural electrificationist):

**MR. RANKIN:** Mr. Speaker, in order to allay the fears of some Members of Congress and a great many people who are not in Congress, let me say that all the recommendations of the so-called National Resources Planning Board will never be written into law.

Some of those recommendations, of course, are good; they could not say as much as they did without saying something good; but on the whole the program they propose constitutes the most fantastic conglomeration of bureaucratic nonsense that was ever sent to the Congress of the United States.

They remind me of the story in *Gulliver's Travels*, where he visited a country with a planning board that had been working for eight years attempting to develop a process for extracting sunbeams from cucumbers.

If this program, proposed by our so-called National Resources Planning Board, were put into effect, it would wreck this Republic, wipe out the Constitution, destroy our form of government, set up a totalitarian regime, eliminate private enterprise, regiment our people indefinitely, and pile upon their backs a burden of expenditure that no nation on earth could bear.

**THE SPEAKER:** The time of the gentleman from Mississippi has expired.

From which we gather that Mr. Rankin is only mildly enthusiastic for the cradle-to-the-grave plan.

### 'Round and 'round and 'round

BECAUSE of a government requirement in connection with a business transaction, a friend of ours had to know whether a customer, born abroad, was a naturalized American citizen. Hesitating to ask the customer what might be an embarrassing question, he addressed an inquiry to the Immigration and Naturalization Service. That was in December. In January the inquiry was acknowl-



edged. In February he was notified that the inquiry had been referred to the State Department. In March he received two questionnaires from the Department of Justice, and a letter saying that his question might be answered if he filled them out, had them sworn to by a notary public, and enclosed a money order for 50 cents. One of the questions he was required to answer was the date of naturalization of the man about whom he made the original inquiry.

"That's where I came in," said our friend, evidently a movie fan, grabbing for his hat.

### Mrs. Malaprop on manpower

ANENT manpower: A Boston businessman sends us the following letter addressed to him on behalf of a job applicant:

"I am happy to concede Mr. Blank's ability to handle the position you offer.

"His former work, as an owner of a piano store, was inveterate and was handled with capability until the present war extenuated the piano supply.

"To the extent of my knowledge of Mr. Blank, I will readily conform his sociability, his initiative and most of all his honesty."

That's the trouble with the manpower situation; it's extenuated.

### Keeping abreast

OUR staff reads everything it can get its hands on in the way of treatises by experts and men of vast experience. An intriguing article turned up recently in a well known monthly publication headed "New Products for Post-war America" and carrying the resounding subtitle "The Challenge to Engineers and Business Men."

The challenge, in the main, is that the automobile industry ought to stop making standard passenger cars and devote itself to turning out little bug-like things like the Dodgems in the amusement parks, replete with rubber strips around their middle for protection against other Dodgems. The author earnestly argues that this is only an example of "vast, manifold and fascinating" possibilities which lie ahead if industry and government "recognize their opportunities."

Turning to the back of the magazine for identification of the author, our Department learned that he has "worked at just about everything," and is 28 years old. He ran for the New York State Assembly on the Labor and Fusion tickets in 1938 and, failing of election, got a job—guess where?—special assistant to the Director of Foreign Agricultural Relations.

### It's quite a dream, too

SPEAKING of "experts," we are glad to introduce to you Dr. Eveline M. Burns, Chief of the Economic Security and Health Section of the National Resources Planning Board. You probably read in the papers that it was she who had the great privilege of laying on the President's desk the "American Beverage Plan."



## PURE WATER is like Liberty— worth fighting for

**A**N efficient water supply system is a bulwark of public health, not only in the community it serves but to the nation at large. Epidemics of obscure origin can have disastrous and widespread consequences.

\* \* \*

As a result of the far-sighted planning of water works engineers, most water supply systems are still rendering good service despite wartime handicaps. Defense requirements slowed down a nation-wide program of water works and sewage works construction for the protection of water supply by treatment plants and abatement of stream pollution. War brought it to a halt.

*An informed public will insist that these vital services be restored to peak efficiency as soon as possible after the war's end. Pure water, like Liberty, is worth fighting for.*

\* \* \*

We publish this message in the public interest since our peacetime product—cast iron pipe—is used almost wholly in the public service. More than 95 per cent of this country's water mains are cast iron pipe which serves for more than a century.

### NO. 1 TAX SAVER



Pipe bearing the above mark is cast iron pipe. Made in sizes from 1 1/4 to 84 inches.

# CAST IRON PIPE

## RESEARCH ASSOCIATION, CHICAGO





## Yesterday Jimmy was 20

How different from last year! Then the lighted cake that mother made said "Happy Birthday"...now, it's "Field Ration C" in a steamy jungle. Then, English and History at college...now, each day a semester of experience in learning why constant vigilance is the price of survival!

Jimmy represents the hundreds of thousands who are sacrificing FOR YOU. You can and must *Back Them Up With Bonds*. This is no time to talk about what you can "spare." Sacrifice to buy—bring the boys home sooner; be able to look them in the eye when they return.

INVEST 10% OF YOUR INCOME

BUY WAR BONDS

BEST INVESTMENT IN THE WORLD

**TO THOSE ENGAGED IN WAR WORK.** There are certain models of Monroe machines available for purchase under WPB regulations.

Our countless users did wisely when they put their figure production on sturdy precision-built Monroe machines. Monroe equipment has always been a priceless asset, now more so since our plant is on war work.

This war assignment calls for a type of engineering development and production which requires unusual facilities and skill; the fact that our plant was specially selected for this work augurs well for continued Monroe leadership.

Let a Monroe expert analyze your figure work and suggest time-saving short cuts; keep your Monroe operating efficiently through regular inspections by trained specialists under our Guaranteed Maintenance service.

Call nearby branch or write Monroe Calculating Machine Co., Inc., Orange, N. J.

# MONROE

Machines for Calculating,  
Adding and Accounting

According to a profile in a Washington newspaper, Dr. Burns and her husband, who is also a Dr. Burns and also in government service, were born in England and came to this country because "they noticed that, in reading the *Manchester Guardian*, the first thing they turned to was the American correspondent's column. They were thinking like Americans and it seemed as if the only thing to do was to become Americans."

"For years," the newspaper story continues, "Dr. Burns has been dreaming about 'freedom from want' for the people of her adopted America. When she laid the American Security Plan on President Roosevelt's desk a short time ago, at least part of that dream had come true... On the basis of their contribution to date, America can well be grateful to be their adopted country."

### Rationing is big business

EVERYBODY now has Ration Book No. 2, or should have if he wants to keep body and soul together. Just in passing, here are a few facts about the printing of enough of these books to supply the whole population:

Ninety-six carloads of chemically-treated, safety check paper were used. The printing requirements were so complicated that only 18 printers could be found in the whole country capable of meeting specifications. The books were printed at the rate of 500,000 a day. They will contain a total of 30,000,000,000 stamps, the equivalent of all of the United States postage issued in the past 12 years.

### As Wilson saw it

SUPPLEMENTING the testimony of Bernard M. Baruch (Page 23) as to the role of business management in war-time, is this statement by Woodrow Wilson, referring to the managers of war industries in 1918-1919:

"They turned aside from every private interest of their own and devoted the whole of their trained capacity to the tasks that supplied the sinews of the whole great undertaking. The patriotism, the unselfishness, the thorough-going devotion and distinguished capacity that marked their toilsome labors day after day, month after month, have made them fit mates and comrades to the men in the trenches and on the seas."

### Quotable quote

"AS INDIVIDUAL citizens, we cannot all write letters or articles. We cannot march *en masse* to Washington. We have elected our Members of Congress—Senators and Representatives alike—to legislate wisely; but, above all, we count on them to preserve those institutions... which in the past have made America free and great.

"Today on Congress there lies heavy the greatest responsibility possibly in all its long and great history. On it alone can we count."

—JAMES TRUESLOW ADAMS



# Invisible G-MAN

## The Story of Super-Sleuths of War Production

WHEN the FBI gets on the trail of a potential saboteur, tracks him down, and catches him before he can do any damage—that's front-page news! Yet there are a few score unsung sleuths doing this kind of work—all day and every day—in America's war factories. This is their story.

They are the million-volt X-ray units developed by G-E scientists just in time to go to work, all-out, in war production.

The saboteurs they catch are flaws and blow-holes—unintentional, of course—in big castings for war machinery. The kind of mistakes that *will* turn up occasionally, no matter *how* careful and skillful

the foundry worker. But serious all the same.

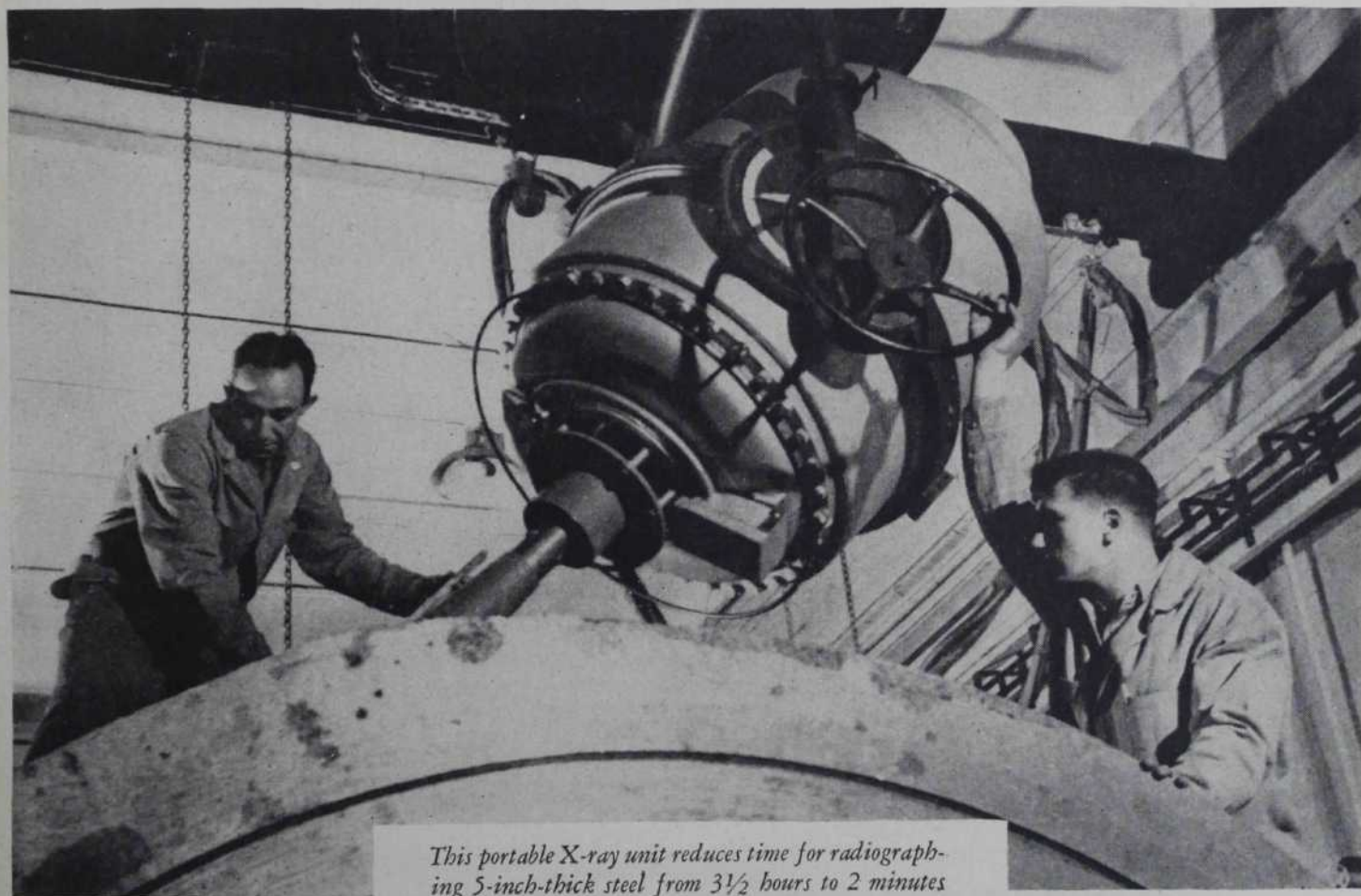
The worst of it is, they usually don't turn up soon enough. Buried in the middle of six or eight inches of hard steel—it's tough luck when they're discovered only after priceless hours of expert machining have gone into the job. And if the part is almost ready to ship, and the last cut of the tool runs into a flaw—then it's tougher!

That's just one calamity the million-volt X-ray keeps from happening. It pours out rays like those from radium, and a lot more plentiful. They pass right through the thick metal; in minutes they show up defects before a stroke of work has

been done. Anything that isn't perfect goes back to be melted over—literally liquidated!

It would take a catalog to list all the other war jobs these X-ray units are doing, and violate the rules of military secrecy as well. But we have them because G-E scientists and engineers have been exercising their ingenuity and perseverance on the subject of electronics for years. And they've only scratched the surface.

After the war this same ingenuity and perseverance will bear fruit in things to make peacetime living better. Which is why this promising field of electronics will bear watching! *General Electric Company, Schenectady, N. Y.*



*This portable X-ray unit reduces time for radiographing 5-inch-thick steel from 3½ hours to 2 minutes*

**GENERAL  ELECTRIC**

952-459C1

RESEARCH AND ENGINEERING KEEP GENERAL ELECTRIC YEARS AHEAD.



# How many miles in a gallon of gasoline?

**O**UT of the need to save rubber, gasoline is rationed – necessarily in terms of gallons.

Your use of it, though, is measured in miles.

How are you going to get essential miles out of the fixed number of gallons that are available to you?

The size and kind of car you drive has much to do with this, but not everything.

Carburetor setting, spark plug condition, clutch action, tire pressure and numerous other things – including your driving habits – all help determine how many miles you get in your car from your gasoline.

Any General Motors car dealer can help you get top mileage by taking care of me-

chanical matters. He can help keep your car efficient, which is the basis for gasoline economy.

So why not take effective steps to get full mileage from gasoline? Let the GM dealer put and keep your car in most efficient condition – and show you how to handle it to stretch your regular ration.

Both are part of his job – and it's a job he *knows!*

★ ★ ★

*The Automobile User's Guide answers your questions about taking care of your car and your tires in wartime. For a free copy see any General Motors dealer today or write Customer Research Staff, General Motors Building, Detroit.*

#### GENERAL MOTORS DIVISIONS NOW PRODUCING:

Aircraft Engines • Airplanes • Airplane Parts • Bomber Sub-Assemblies • Military Trucks • Armored Cars • Rapid-Fire Cannon • Machine Guns • Diesel Engines • Shells • Tanks and Tank Parts • Propellers • Cartridge Cases • Gun Motor Carriages • Gun Mounts • Fire Control Devices • Electrical Equipment • And Many Other Wartime Essentials.



# GENERAL MOTORS

CHEVROLET • PONTIAC • OLDSMOBILE • BUICK • CADILLAC





Official U. S. Navy Photo

## LOOK OUT FOR LANDLUBBERS!

An "ashcan" ploughs the depths to destroy an enemy sub. A shell is fired. A bomb dropped. Enemies fear the seamanship of our straight-shooting, hard-hitting Navy. Yet, strangely enough, many of its ablest men come from inland states.

And—in hundreds of towns that never saw the sea other Americans are laboring to produce the thousands of parts to be assembled into guns and shells. Into ships and subs. Into marine power plants and sea planes . . .

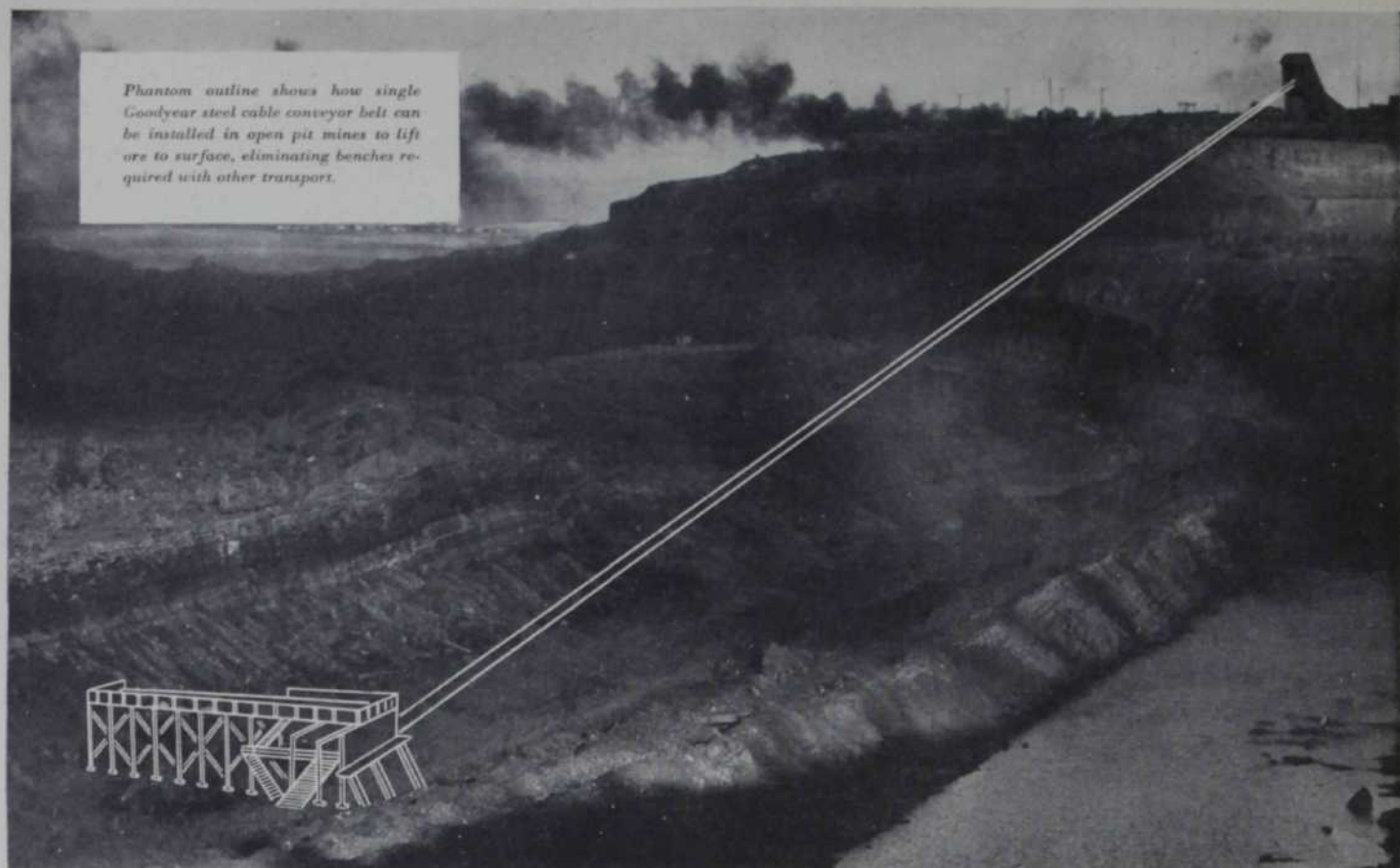
Close by each of these war production plants is a convenient source for fine lubricants . . . one of Texaco's more than 2300 wholesale supply points. Also on instant call . . . Texaco's specialized engineering service . . . to assure full operating efficiency and economy.

**THE TEXAS COMPANY**





*Phantom outline shows how single Goodyear steel cable conveyor belt can be installed in open pit mines to lift ore to surface, eliminating benches required with other transport.*



## THE WEDDING OF STEEL AND RUBBER

*—the most revolutionary improvement in conveyor belting since the beginning of modern industry*

Now Goodyear brings to industry a historic advance in conveyor belting — a development that makes it possible to transport bulk tonnage far longer distances without transfer — at far lower cost per ton-mile!

In this new Goodyear belt the carcass is composed of sinewy, multi-strand steel cables instead of conventional cotton fabric construction. Cables are embedded in rubber by a special Goodyear process that permanently bonds cover to carcass and insures long flex life.

With this new steel-cable carcass

a belt of 6-ply thickness has the strength of normal 14-ply construction. This greater strength in a thin flexible belt now makes it practicable to employ single belts from TWO to THREE miles long, where the terrain permits, in place of a series of several shorter belts that would have been necessary heretofore.

Use of fewer belts eliminates transfer points, and with them the duplication of motors, take-ups, controls and supervision necessary to operate individual belts. *These savings alone will pay the cost of the belt*

*in large tonnage operations.*

This great development further advances the position of Goodyear overland belt haulage systems as the world's lowest-cost carrier for bulk tonnage. The first Goodyear steel-cable belt is already in operation on the Mesabi Range, speeding iron ore output. For the time being these belts are restricted to such essential war industries, but after victory they promise new economies in all mining, construction and other large haulage operations. Men of vision, planning for the future now, can get full details from the G.T.M. — Goodyear Technical Man — by writing Goodyear, Akron, Ohio or Los Angeles, California.

# GOOD YEAR

THE GREATEST NAME IN RUBBER



# You may have no need for an AIRPLANE FILTER-



—and we haven't bought this space just to say so.

Our purpose, of course, is to tell you how to get the *important information* about other AAF filters and process dust control equipment *you do need*.

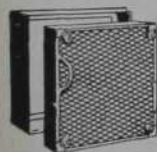
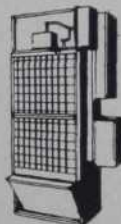


## ROTO-CLONE FOR PROCESS DUSTS

Combines exhauster and dust collector in a single compact unit. Eliminates extensive piping—reduces installation costs. Come in a wide range of sizes for all industrial needs.

## ELECTRO-MATIC FOR ATMOSPHERIC DUSTS

Combines automatic air filtration and electrical precipitation to obtain the highest efficiency in the removal of atmosphere dust and smoke.



## AAF UNIT FILTERS

The original air filter introduced in 1920 is still widely used for industrial air cleaning. Easily installed in new or old ventilating systems.

Please send descriptive booklet "AAF In Industry".

Name

Firm

City  State

AMERICAN AIR FILTER CO.  
109 Central Avenue  
LOUISVILLE, KY.



# Nation's Business for April 1943



## Drive Slowly—Soft Shoulders Ahead!

**T**HE DELANO report on security from cradle to the grave, sent to Congress by the President, recommends a permanent change in the social and economic structure of the United States. It proposes increased government control and ownership of business; widespread "insurance" coverage; and a greatly expanded N.Y.A.-W.P.A. make work program.

The goal to be obtained is the dream and prayer of all Americans. Unfortunately, like so many short cuts, the ways and means to reach a destination so desirable are unpleasant details to be worked out later.

One thing is certain: the burden of proof is upon those who advocate such a radical change in the American way of life. Lest we forget, that way of life has made us, based upon any test, the envy of all peoples everywhere. Our well-being is the result of individual effort, with government acting as umpire. Any plan to substitute for this a pseudo-partnership with government "experts" must be argued for, must be defended against the known experience of America, where governmental restraints have been at a minimum, and where man has been most free.

In point of time, aside from the political expediency of the moment, the announcement of the Delano Plan is unfortunate. It comes when men and women, high and low, are skeptical of the omniscience of government planners, and of their capacity to administer their plans. Too recent is the Blue Eagle which failed to increase purchasing power; of buying and selling gold at a price fixed each morning which failed to restore commodity prices; of the annual promise to balance the budget; of sterilizing gold, of a deficit spending policy the result of which the war has temporarily postponed; of planning in the field of labor, and of agriculture.

Still more recent are the effects of Washington planning in rubber, sugar, gasoline, fuel oil, and food, and on down to the simplest of plans, bread-slicing, tire-recapping and pleasure driving. And there is scarcely a citizen who has not had an eye-opening personal experience with some phase of the administration of war planning in the economic field.

So, the country will await more details. Particularly, will it watch for one omission in the plan—the cost. Not only the cost to those who must work and produce and save to provide the money; but also the cost of the additional millions of citizens who must be taken from the nation's production line to administer as government employees the wide range of new duties the Government proposes to take on.

While waiting for this information, we may beguile ourselves with a similar situation which confronted Alfalfa Bill Murray of Oklahoma. He was campaigning for Governor on a platform of increasing the old-age pension. When a roving correspondent, John T. Flynn, reminded him that the present payment had set the state back \$25,000,000, impairing its credit, and asked the Governor how he expected to get the wherewithal for the larger pension, the Governor replied,

"That, sir, is a detail to be worked out after the election."

*Meree Thorne*



# TRUCK-TRAILERS

## TAKE OVER *a Different Kind of Job*



*An Inter-Plant Bottleneck is Broken in an Essential Industry!*

YOU'LL find Milwaukee Milling Machines, by Kearney & Trecker Corporation, doing vital work in most American factories producing war goods. In fact, Kearney & Trecker build more milling machines than any other company in the world... and group membership in the Army Ordnance Association attests the importance of their work.

Some time ago, when the need for machine tools zoomed Kearney & Trecker's production, a bottleneck developed... heavy material couldn't be moved quickly enough between their three adjacent plants.

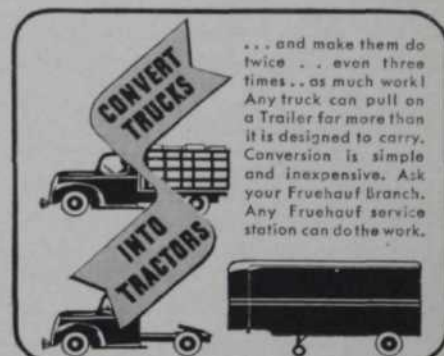
Dependable carriers were required... carriers capable of handling tremendously heavy loads day after day. A tough, bruising job for any equipment.

Truck-Trailers might be the answer, Kearney & Trecker officials thought. So they bought one truck-tractor and four Fruehauf Trailers designed to carry machinery, metal parts and similar loads.

*And Truck-Trailers were the answer!* Shuttling... with the tractor pulling one Trailer while the others were being loaded or unloaded at the various plants... quickly broke the bottleneck. A storage and handling problem was solved, too, for the Trailers, while being loaded, serve as dock space and eliminate the need for docks and multiple handling of material.

After six months, as Kearney & Trecker's production expanded still further, another tractor and four more Fruehauf Trailers were added to the fleet.

Thousands of American companies, in scores of industries essential to the war, many of them with unusual and distinctive hauling problems, have found Truck-Trailers to be the complete solution.



World's Largest Builders of Truck-Trailers

**FRUEHAUF TRAILER CO., DETROIT**

Sales and Service in Principal Cities

### Truck-Trailers Conserve Rubber, Steel, Gasoline, Motor Power!

#### SMALLER TRUCKS USED—

Since a truck, pulling a Trailer, can haul as much or more than a far bigger truck can carry, the large motor units are released for military work for which they are essential.

#### RUBBER AND STEEL CONSERVED—

A Truck-and-Trailer combination uses about 16% less weight of tires and 25% less steel than do the two trucks required to carry the same payload.

#### FEWER TRUCKS USED—

Many companies, previously operating fleets of trucks, replaced some of them with Trailers... and now move the same tonnage with fewer units. "Shuttling" saves still more trucks.

#### GASOLINE CONSERVED—

A motor truck, pulling a Trailer, uses far less gasoline and oil than the one large truck or several small trucks it replaces.



# Fruehauf Trailers

*"Engineered Transportation"*  
REG. U. S. PAT. OFF.

Truck-Trailer Transport is Doing an Essential Job for All America



# MANAGEMENT'S

## Washington LETTER

A last minute roundup by a staff of Washington observers of government and business

BIGGEST PACKAGE OF POLITICAL DYNAMITE THAT has hit Capitol Hill for many a moon is the National Resources Planning Board program.

Don't be misled by the apparent lull in interest that appeared to follow its delivery to Congress.

That lull was not the result of disinterest. Contrarily, it was created because of apprehension.

Leaders in both Houses consider it a political masterpiece, packed with promises of wide-spread appeal.

Opposing it, they fear, will put them in a position of "denying decent standards and security to the masses."

That's why you've been hearing little comment from important members of Congress.

There's an agreement to hold fire, study the program carefully and plan powerful salvos, rather than scatter shot now.

The whole program may be allowed to slide quietly into limbo if the White House offers no real fight.

► Main battle over the New Deal's post-war "partnership" with basic industries will be fought on the floors of Congress under another billing.

The next corporation tax bill will provide an important test.

If the Administration succeeds in holding profits at levels that prohibit laying away reconversion funds, many big businesses may be unable to finance the peacetime changeover, these observers point out.

If this happens, these businesses would be unable to provide jobs and the governmental "partner" would step in, holding the purse strings and running the show.

► Another point bearing heavily on the "partnership" program will be administration policy in the termination of war contracts.

End of the war will catch nearly every

basic industry in the nation deep in the war production pool.

Prompt settlement of cancelled contracts, enabling prime contractors to pass along quick payments to sub-contractors and suppliers, would furnish cash to hasten reconversion.

Slow settlement would hamper it, might open the door to the government "partner."

That's the reasoning behind preliminary steps being taken in Congress to insure prompt settlement payments.

► Look twice at figures (sometimes cited by labor in wage cases) depicting war-swollen corporation profits.

At first glance the profits are impressive. But they are spread thinly over a vastly expanded range of war contractors.

Significant figures have been compiled by the National City Bank of New York.

These show that net profits of 700 manufacturing companies dropped 13.4 per cent in 1942, compared with 1941.

Net, in this case, means after depreciation, taxes, reserves and other charges, but before dividends.

Labor Department figures show that employees' weekly earnings in manufacturing lines jumped 45 per cent in the same 24 months.

► "The boys on the Hill" who advise O.P.A. Director Prentiss Brown in his new campaign to take the political sting out of price control have told him to lay off limiting profits through prices. He will.

Brown has given up trying to convert O.P.A.'s "suffering committee"—the sacrifice for the sake of sacrifice advocates.

So he's weeding them out as fast as he can. Hatchet man is Senior Assistant Clyde Herring.

An example is acceptance of John E. Hamm's resignation. Hamm is Leon Henderson's brother-in-law, follower. He was Henderson's right hand during the O.P.A.'s "I'm telling you" days.

But Brown has far to go. On the very day he announced the end of pleasure driving snoopers, O.P.A. investigators entered 60 Baltimore homes, snooped on kitchen shelves for canned goods.

Don't confuse Brown's changes of policy with indications of better war-time living. Brown controls only the mechanics of rationing, doesn't fix the extent.

Determination of what will be rationed, and to what extent, is out of his hands. Wickard controls food, Ickes oil, Jeffers rubber, Nelson shoes.



► Watch for food rationing straight across the board.

Washington experts say it can't be avoided, that Food Administrator Wickard recognizes this privately.

Even cereals will go on points to avoid heavy drains due to buying overflowing from less plentiful lines, these experts predict.

The same principle will apply to evaporated or condensed milk, they add.

Fresh fruits and vegetables still are listed as possible exemptions.

But eggs, fish and fowl are likely to fall into the coupon class as the real, acute food situation unfolds.

► Some fishing boats are idle, some working only part time.

That's the word from the industry, which says it is suffering because it has no champion in the Battle of Washington.

The catch that last year sent 4,000,000,000 pounds of fish to market will fall to between three and 3½ this year. That's the trade's estimate.

Commercial fishing has been caught in the Capitol whirlpool. First it was under Commerce, then War Production Board until Donald Nelson gave it to Food Administrator Wickard, who promptly turned it over to Harold Ickes.

There's a move on to shift it back, win it a more prominent place in the food picture.

► Look to your regional manpower director for settlement of 48-hour-week problems.

He (or she) has complete authority to determine whether or not your plant must lengthen the workweek.

Under Manpower Commission interpretation of President Roosevelt's order, the workweek must be extended in designated areas and activities IF IT WOULD:

NOT release employees, or

Release only employees who could be placed promptly in suitable employment with other employers.

If there is question about finding "suitable employment" for workers to be released, let your regional manpower director make the decision.

The President's war-time workweek order does not affect your right to discharge employees for cause, such as incompetence.

It does require employers in affected areas to refrain from hiring new workers "when their manpower needs can effectively be met by a fuller utilization of their current labor force."

Reliable studies show that employees of more than two-thirds of the nation's in-

dustries were working 48 hours or more before the Presidential order came along.

Lack of materials, operations problems usually are listed as cause for shorter week in the other third.

In view of these findings, industrial analysts asked what effect the 48-hour week will have on war production usually answer: "None."

► What will happen when the "For Sale" sign goes on war stockpiles at war's end?

Interest on that question is being shown in Senate chambers.

There has been study of World War I records, advice from experts outside of government.

Tendency of present thinking is to set up special liquidating machinery, take the job out of operating or procuring offices.

Bureau of Budget estimates the value tag on postwar plant and material surplus will read \$50,000,000,000.

► It's no more than an early straw in a faltering breeze, but—

A hardening of policy toward labor is discernible in off-the-record talk in administrative inner sanctums.

Reports of extreme absenteeism, lack of worker discipline, lack of responsibility, have worn patience thin.

"Results, nothing else, count," are words being heard privately in places where labor's gains have long had No. 1 position on a come-what-may basis.

There's a note of disillusion in many high places (but not as high as the White House) when talk turns to labor.

Watch for a trend in which labor will carry less weight in management problems.

► Chrysler Corporation's report on the distribution of its war job among other plants is accepted in some Capitol Hill quarters as proof that smaller business is getting a good share of the war job.

The report shows that 58.2 per cent of Chrysler's war production is coming from other plants.

The breakdown shows that Chrysler has shared its job with 8,079 other companies, in 856 cities and 39 states.

Of the 8,079 sub-contractors, 4,690 are relatively small companies, 1,607 are medium size and 1,782 are big operators.

► Twenty per cent out for taxes, ten per cent for Victory Bonds, so much for social taxes, more for insurance, perhaps union dues—all out of the worker's pay envelope.

How will he like that? What will he do about it?

Customarily he considers payday cash—



take-home pay—his earnings, is likely to interpret the 20 per cent source collected tax bite a pay cut, demand a raise to make it up, maintain "living standard" wages.

Washington is looking for ways to block such demands through legislation or directives.

► Men high in business ranks find Treasury officials receptive, cooperative in working out details of collecting taxes at the source.

But the cooperative spirit doesn't cover the main issue. That is: "who will pay the not inconsiderable collection cost?"

Treasury is reluctant to share any part of that cost. So far has turned down proposals from business that it be divided.

Suggestion from business is that full collection cost be deducted from remittances to the Treasury on a flat percentage basis.

Business insists that the Government take on the educational campaign, telling workers their obligations, rights, procedures.

Some workers may think the tax is a kick-back to employers.

► Office of Defense Transportation is conducting studies that may result in an increase in the national speed law—at least for big trucks and busses.

Manufacturers of heavy road vehicles can point out that this equipment usually is geared to operate most efficiently, economically at 45 miles an hour, not 35.

The 35 limit doesn't give trucks and busses an opportunity to use its gas-saving overdrive.

Tire engineers say the recurring pull on tires caused by gear shifting—which occurs more often at lower speeds—may result in greater wear than smoother, faster travel.

► "No thanks, I've had enough," is government's attitude toward liquor rationing.

It doesn't want the headache, already has too many rationing headaches to ask for another.

Fact is, the distillers are doing the conserving themselves, unofficially and individually.

Sell-out would leave them but two alternatives—withholding brand names from postwar markets pending aging, or jeopardizing their established value on bottles of greener stuff.

So most distillers are only partially filling orders. With this brake on sales, present stocks will last three years.

Geographical spottiness of over-the-counter domestic whiskey sales will even up this month.

Monopoly states didn't warehouse big stocks. Retailers and wholesalers in open states did, but these reserves are about gone.

► Intensity of the feeling between nations on the subject of postwar international airways may be gathered from the tone of Viscount Cranborne, speaking before England's House of Lords:

"If other nations insist upon cutthroat competition we are quite ready to enter the fray against them.

"We have produced the best war planes and we are convinced we can produce the best for civil flying....

"We would prefer international collaboration, and such collaboration we are ready to discuss with the other nations concerned."

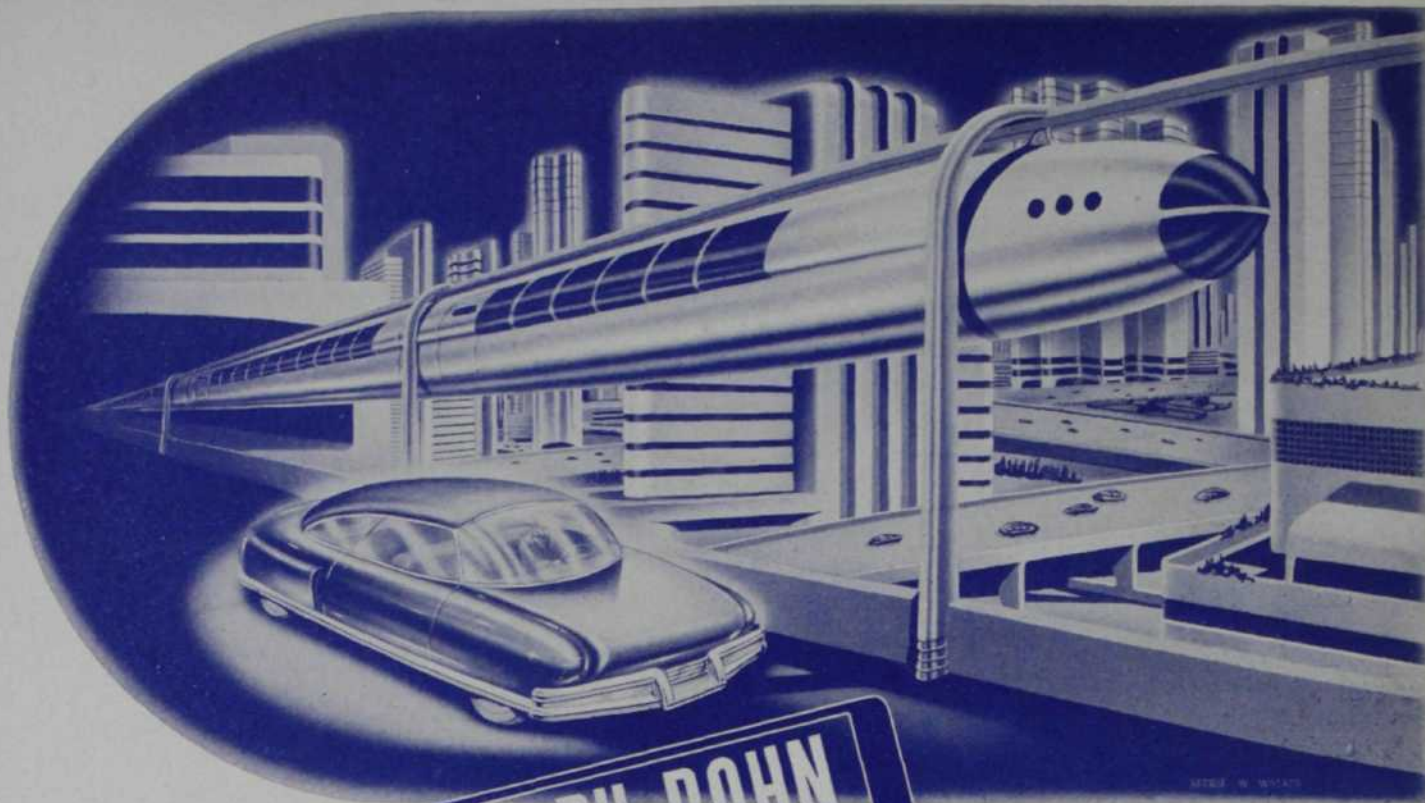
These remarks were received in Washington as an answer to outbursts in Congress.

A significant note cropped out when Lord Cranborne said a special committee had made recommendations to safeguard England's civil aviation interest three weeks earlier.

That was before congressional world airways talk grew loud.

TOO LATE TO CLASSIFY: Experiments in the manufacture of vitally needed alcohol from wood waste under the German Scholler Process will be conducted by two privately owned plants under W.P.B. supervision.... Manufacturers say there won't be enough glass jars to can Victory Garden produce.... Most of the little ice cream wagons you saw on the streets last summer will be carrying chilled rivets in war plants this year.... U. S. Chamber of Commerce has opened a campaign to improve industrial health, biggest single factor in absenteeism.... The old roll-top desk principle is being used to make wooden soles for women's shoes flexible.... Shortage of fats may bring another cut in soap production, could force soap rationing.... A Los Angeles area airplane plant reports that it is hiring 2,000 workers a week, losing 1,200.... Director Harold Dewey Smith handles the nation's budget, but Mrs. Smith handles their own.... In the last war the average worker had the power equivalent of 3½ horses at his disposal. Today it is 6½.... While Civil Service officials talk about over-staffed bureaus, Office of Emergency Management personnel employees meet incoming girls at the trains, arrange tours and social events so they won't find Washington dull, go back home.... Army's acceptance of helicopter brought a rush of interest among postwar industrial researchers.





## FORECASTING BY BOHN

Today America's manufacturing processes are concentrated solidly on war materials for Victory. From this gigantic effort will spring many new developments of vast economic consequence to the entire universe. The City of the Future will be born—startling new architectural designs will be an every day occurrence! New alloys—new materials—new applications—designs engineered by Bohn will be an important contributing factor in making possible a world of new products. Remember the name Bohn. Our advanced knowledge will be most helpful to many manufacturers in redesigning their products of tomorrow.

# BOHN



**BOHN ALUMINUM AND BRASS CORPORATION, DETROIT, MICHIGAN**  
GENERAL OFFICES—LAFAYETTE BUILDING

*Designers and Fabricators—ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS*



# Our Post-War Partners

By ERIC A. JOHNSTON

**THE PRESIDENT of the U. S. Chamber finds South American business men have faith in the capitalistic system**

I HAVE just completed a month's crowded tour of South America, traveling mostly by air, and conferring with scores of leading business men and high government officials of Brazil, Argentina, Uruguay, Chile, Peru and Colombia.

Impressions gained "on the fly" are often hazardous. Yet three points stand out sharply and are confirmed by every business man with whom I talked.

**1. The war's impact** has been as disruptive to some phases of South America's normal economy as it has been to our own. The South American continent has lost all or part of its former sources of supply, and of its principal markets for such non-strategic items as coffee, cocoa, bananas and many similar commodities which traditionally have been among its chief exports.

**2. There is agreement** that the "enlightened self-interest" of both continents requires the closest collaboration of their governments and business men, and permanent adherence to the Good Neighbor policy.

**3. There is supreme confidence** and determination among South American business men that the vexing problems of war and peace alike can, and will, be solved under the capitalistic system; that by working together we can build in these two continents a mighty, impregnable civilization based upon the twin rocks of human liberty and free enterprise.

From first-hand evidence, I am con-



KURT SEVERIN—BLACK STAR  
**Toward a better understanding. This crowded section of the library in Rio de Janeiro contains only volumes about the United States**

vinced that North and South America have a great deal to offer each other. Our sister republics need our technical assistance, our markets for a wide variety of agricultural products and raw materials, and joint investment of capital. Quite aside from the contribution they are making to hemispheric security, they offer us an unlimited supply of strategic raw materials, and an eager and expanding market for our more specialized, manufactured products.

## Breath-taking continent

YOU have to fly over the breath-taking, lush interior areas of South America, over its vast mountain ranges and jungles and deserts, its plateaus and rivers and coastal plains, to grasp fully the enormous natural resources and potentialities for development which exist down there.

Quickly you understand that South America cannot be considered or treated as a unit, that every approach to its problems must recognize profound differences in peoples, cultures, standards of living and general outlook—differences not only between nations, but between groups within each nation. In a short airplane flight one may pass from the most modern and progressive of cities to the most primitive, ox-cart and mud-hut civilization.

This means to both business and governments that every problem has many unexpected facets. In every approach, the special characteristics of each nation must be given careful weight. But, regardless of external differences, everywhere I went I found that, among business men of the southern republics, there runs a common faith in the capitalist system, enthusiasm for the promise it holds for



tomorrow, and eagerness to make common cause with the United States in upholding and strengthening free enterprise.

Our neighboring business men know that the key to greater prosperity and higher living standards is increased production. They know that capitalism is the most potent force ever devised to bring about increased production. They know, in addition, that capitalism offers the strongest safeguards for individual liberty—and South Americans, make no mistake, are thoroughly wedded to the principle of human rights.

Problems of diplomacy, customs barriers and the like will require that business work in close harmony with the governments of all the Americas to restore trade and commerce when peace comes. But South American leaders to whom I talked emphasized that business men of both continents must provide the motive power and the management planning for future economic development, if the capitalist system is to be preserved and strengthened. They know that living standards cannot be raised overnight or by passing political miracles.

South America has been hard hit by our temporary inability to supply many essential items because of production curtailment in the United States, and shortage of shipping. Yet, South America is providing our war industries with great quantities of essential materials, such as copper,

bauxite, tin, lead, manganese, zinc, mercury, nitrates, balsa wood, mahogany and quinine. In addition, our neighbors are stepping magnificently into the breach created when our pre-war sources of tropical-grown materials, such as hemp and rubber, were cut off.

### Post-war bank accounts

THUS, while much of South America's normal economy is suffering severely, our purchases of strategic materials are building up favorable trade balances in several countries. As one outstanding business man put it to me, South America "will have money in the bank when the war ends."

This will help accelerate our neighbors' journey along the road of industrial development. When the war ends, they will be able to buy from us enormous quantities of machinery, tools, construction materials, airplanes, automobiles, chemicals and the like. South America needs railroads, highways, farm machinery, shipping, the products of steel mills, cement plants—practically everything that enters into industrial and agricultural expansion.

Her population of 90,000,000 is one of the world's greatest markets, in terms of both present and future purchasing power. Brazil alone, with an area greater than that of the United States, has 47,000,000 of the total population, and from what I heard and

saw in that country, I predict that Brazil, in the first few years after the war, will astonish the world with the speed and scope of its industrial development.

The greater our contribution to South America's prosperity, the greater will be the return to us; the greater its ability to buy what we produce.

We should congratulate ourselves upon the type and character of business men from the United States who have lived for years—some for decades—in South America and are doing business there. They have been true "ambassadors of good will," because their standing is exceptionally high with South Americans.

Many of them told me that their lot was made difficult by aspersions cast upon them by certain groups in the United States. These groups advance the false contention that our business men are mere newcomers, interested only in exploitation. As a matter of fact, no group is more highly regarded in South America than business men from the United States who have made their homes there.

I also received numerous protests from our business men in South America that one or two of our own government agencies appear determined to cut out private business in business transactions with South American interests. These agencies, I was told, seem to prefer to deal direct through South American Governments, even

(Continued on page 58)



Every approach to South American problems must recognize profound differences in peoples, culture, general outlook—progressive cities and primitive, ox-cart civilization

ERWING GALLOWAY



# Let's Use All Our Strength...

**Business and industry should be given** the fullest possible play during war, though necessarily under government direction. Real unity requires that government, business, labor and agriculture work as a single, harmonious family.

**We can't wage total war** without a total economy. We haven't yet achieved a total economy but it may not be too late to do so. Among the most important benefits would be the enabling of big business to take care of little business, strengthening both.

**Skeletonize—but never destroy—non-war enterprises.** Concentration may be all right for a country like England, but its conditions are not ours.

**The black market menace** can be dealt with best by placing more government reliance upon the established channels and practises of production and distribution. Established firms know how the machinery works, they know best how to get the stuff to consumers and keep it in line with the consumers' pocketbooks.

**THESE** are highlights of the views held today—March, 1943—by Bernard M. Baruch, elder statesman and counsellor extraordinary. They grow out of a broad experience in the mobilization of industry for two wars, and especially as chairman of the War Industries Board in World War I.

Having no portfolio or official responsibility in the present great struggle, Mr. Baruch declines to write or talk for publication today. But he readily agrees that these statements reflect his 1943 convictions as accurately as they reflect those he held in 1918-1919. His beliefs are a matter of record, and he hasn't changed them.

Mr. Baruch is not given to snap judgment, nor to yielding to the expediency of the moment. His deep confidence in democracy and democracy's methods springs from years of arduous training in the hard school of trial and error.

Memories are short, and many of the lessons bitterly learned in World War I have been forgotten. Numbers of high government officials who are directing the mobilization of the home front in this war are unfamiliar with the experience gained in the last one. An important administrator, for example, recently brushed aside the knowledge gained in World War I by saying "I wouldn't know about that; I was only seven years old then."

What Bernard M. Baruch did, said and felt in the cool of the evening after the armies of World War I had been demobilized, is strikingly applicable to the policies and problems of today. Fresh from his chairmanship of the War Industries Board, he made a detailed report to the

**BERNARD M. BARUCH, Chairman of the War Industries Board in 1918, applies the same sound understanding of the nation's needs and human behavior to the problems the nation is facing today**

nation. Consider these statements by Baruch in 1921, in the light of 1943:

"There is a general theory deeply ingrained in our political habits to the effect that government should not interfere with the process of business any further than is necessary to preserve the principle of fair competition and to insure the observance of ordinary legal obligations. For development and progress, individual initiative is relied upon. The public welfare is to be served by the spontaneous, common purpose of a free people."

"Whether a card system of distribution, a priority and price-fixing system, or any other system would work unless supported by the complete confidence of the people is questionable. We can only know that in applying the procedure which was developed, we found our people convinced that control was necessary and we found them always willing to acquiesce, whether they considered certain particular rules wise and necessary or not."

"It is not only the duty of the War Industries Board to stimulate and expand production in those industries making war essentials; it is equally the board's duty to protect, as far as may be, those industries not immediately essential to the war program."

"It is the policy of the board, where retrenchment and curtailment are necessary, to keep alive, even though it be necessary to skeletonize, the enterprises in this group, and not to destroy them."



ARMSTRONG ROBERTS

"Ample notice of proposed curtailments of non-war industries was given and their representatives appeared before and agreed with the committee on bases of curtailment. This enabled them so to reorganize their businesses as to engage in the production of war necessities, or reduce the volume of their output, or both. No industry was branded as non-essential, but every effort was made to preserve the organization of every unit in each industry through the use of its facilities for war production or otherwise, to the end that it would be prepared to go promptly forward with its normal activities following the conclusion of peace, but at the same time, men, materials, and capital were released, and transportation was relieved for the more efficient prosecution of the war."

"The process of drawing up tentative schedules of regulations, based on the recommendations of the trade or-  
(Continued on page 70)



# Business Skill Dons

By PAUL HODGES



**A** BIG Army transport plane stands on the line at Morrison Field, West Palm Beach, Fla. Its motors are idling as the service crew swarms over it. The pilot checks his weather reports and looks at his watch.

The crew chief checks items on the cargo manifest. An axle assembly for a military truck. Tires for a B-17. A case of medical supplies. Twelve mail bags. A bicycle. A water pump assembly. A crate of candy bars. Several cases of motion picture film. Twelve reels of field wire. Two rolls of rubber hose. A packing case of G. I. shoes. And so on down a long list.

Three passengers, all wearing khaki, clamber aboard. The pilot gets his clearance from the control tower, and the plane lifts into the skies—on schedule. Bound across an ocean to a destination which is a strict military secret.

The scene will be repeated many times at Morrison Field on the same day. And it will be repeated at other fields all over the globe—fields in China, India, Hawaii, Australia, New Zealand, North Africa, Alaska, Greenland, Iceland. From many fields in many places both strange and familiar, the big transport planes of the Army Air Corps Transport Command operate every day on routine flights—on schedule.

Most of the pilots and crew members wear Army uniforms. Some wear

the uniforms of commercial air lines. But the whole operation is conducted under a single command, using the technique, many of the facilities, and much of the personnel developed by commercial enterprise. Back of it all lies a far-flung organization and a staggering amount of planning and management.

A businessman in uniform is the directive genius of the Transport Command. He is Brig. Gen. C. R. Smith, chief of staff of the Air Transport Command. Before he put on the uniform he was president of American Airlines.

General Smith and hundreds of others who serve with him brought business "know-how" to the Army. "Know-how" that was developed in the crucible of commercial experience and development.

## The fireman is a sergeant

A FREIGHT train puffs into Camp Claiborne, La., from Camp Polk, 50 miles away. This is an Army railroad and the 714th Railway Operating Battalion runs it. Railroad men, fresh from years of experience with commercial railroads, make up the battalion's membership.

The engineer climbs down from his cab, wearing the uniform of a lieutenant. A few months ago he was a fireman on the Northwestern. The fireman of the Army train is a sergeant; not long ago he was a fireman on the Pennsylvania. Another sergeant, Leo Murphy of Minneapolis, was a conductor on the Great Northern; now he's an Army switchman. Private Coleman Franklin of Richmond, once a fireman on the Seaboard, is an Army brakeman. And so on.

One day these men and their companions of the 714th may be required to run a railroad captured from the

enemy in a far-off place. They may be taking trains through dangerous territory, under fire. Against that day they are learning at Camp Claiborne the basic Army subjects.

The 714th is sponsored by the Chicago, St. Paul, Minneapolis and Omaha Railroad, but its men are drawn from many private railroads. It has four companies, and every man is a railroader.

There are many battalions like the 714th. Some work the Illinois Central way, some the Santa Fe way, some the New York Central way, some the "Katy" way. But, regardless of particular method, they, too, brought "know-how" to Uncle Sam's Army. Their officers and management men also come from private railroads.

Brig. Gen. Theodore H. Dillon, deputy chief of the Army Transportation Corps, is their commanding officer. In private life he was assistant to the president of the United Fruit Company, in close touch with that company's widespread shipping and railway operations. The Army Transportation Command directs and supervises the routing and shipping of all War Department traffic. It works closely with private carriers, and actually operates the Army's ports of embarkation and debarkation, the Army Transport Service and the Military Railway Service.

Up in Attleboro, Mass., the Automatic Machine Products Company works 24 hours a day, six days a week. It makes primers, the explosive compound that actually starts the explosion of the propelling charge in a shell. Today there are 101 employees; when the company started making the primers for the Army there were three employees. In the first four months of the company's work for the Army it turned out 500,000 primers. Now it produces that many in a week. It has produced 40,000,000 to date.

The 101 employees all live in Attleboro, or nearby. There's a family atmosphere in the plant, and many of the men and women workers have brothers, uncles, sons, nephews, cousins in the fighting zones. They put so much spirit and will into their work that the Automatic Machine Products Company was the first screw machine



# Khaki

**THE FEATS** of management men on the "production front" are widely known. But the headlines seldom tell of similar achievements by top executives who have stepped from private life into the armed services to help run the "world's biggest business."



CHARLES DUNN

company in the nation to receive the coveted Army-Navy E.

Multiply the Automatic Machine Products Company by tens of thousands and you get a picture of the contribution smaller war plants are making to the war effort.

The task of spreading war work over the greatest possible number of plants falls to another businessman in uniform—Col. Albert J. Browning, former president of the United Wall Paper Co., and before that in charge of purchasing heavy items for Montgomery Ward & Co. Now he's director of the Purchases Division in the headquarters of the Services of Supply.

Last year the Army bought \$17,000,000,000 worth of products—weapons, clothing, machinery, food, housing equipment—more than 500,000 different items from tens of thousands of companies big and little. In every important commercial or industrial center the Army has its own contracting agents. Most of these are businessmen in uniform, recruited from private business firms for their "know-how."

For a progress report on the success of the effort to spread the work around, look at the figures: In January of this year, two-thirds of the Army's contracts, in numbers, and a fourth of the dollar volume, went to companies employing less than 500 persons. That isn't the whole story, because subcontracting spreads the work even further. One big automobile company which holds \$2,000,000,000 worth of war contracts, for example, has sublet to smaller plants contracts valued at \$1,000,300,000.

Servicing the American Army is the biggest business in the world, by any measurement—dollar volume, physical volume, range of items and services. Given time, military leaders think they could train soldiers to build and operate this business. But Time heads the list of shortages. So, as with railroaders, the Army is teaching businessmen how to be soldiers, rather than teaching soldiers how to be businessmen.

## Seldom in headlines

THE examples cited here are picked at random from many hundreds available. In constantly swelling numbers, America's top management men are marching into the armed services. They share the risks, and work to the point of exhaustion. They seldom make the headlines. Yet they do get into the news occasionally. Col. Douglas MacKeachie, former vice president of the Great Atlantic & Pacific Tea Company, was mentioned in the papers a short time ago when he lost his life on a flying mission.

There are top-notch businessmen in every type of uniform of the armed services—Army, Navy, Marine Corps, Coast Guard. Many more are working as civilians, but working just as hard and at the same personal sacrifice. The greatest number is found in the Army's Service of Supply. For military reasons the names of businessmen assigned overseas cannot be given. But, if you ran your eye down the rolls of the Service of Supply, you would find such names as these:

Brig. Gen. W. H. Harrison, formerly vice president of the American Telephone

& Telegraph Company, now Director of Procurement.

Brig. Gen. A. R. Glancy, formerly president of the Pontiac Motor Company, now assigned to the Combat Automotive Center at Detroit.

Col. John M. Franklin, formerly president of the United States Lines, now Chief of the Water Division, Transportation Corps.

Lieut. Col. Richard C. Mellon, formerly chairman of the Mellon National Bank, now assistant to Major General Phillipson, Army Emergency Relief.

Maj. Daniel Simonds, formerly chairman and president of the Simonds Saw & Steel Company, now assigned to Headquarters, First Service Command.

Col. Herbert R. White, formerly vice president of General Motors, now assistant executive officer to the Chief of Ordnance.

Col. William Gibson Carey, Jr., formerly president of the Yale & Towne Manufacturing Company, now assigned to Second Service Command, New York.

Col. W. J. Williamson, formerly traffic manager, Sears, Roebuck & Company, now Chief of the Traffic Control Division, Transportation Corps.

And so on, by the hundreds.

"The best way to get production results," said Maj. Gen. Levin H. Campbell, Jr., Chief of Ordnance, "is to turn businessmen loose, wherever possible, on the job they know how to do best."

The Army has turned them loose, wherever possible. That's one reason why Lieut. Gen. Brehon Somervell, chief of Services of Supply, was able the other day to say:

"In 12 months we have created within the War Department one of the largest organizations for service ever conceived by man; we have staffed it competently; we have set objectives that most men insisted could not be reached in twice 12 months. We have attained those objectives."





# A Young Man With Power

By LARSTON D. FARRAR

**J. A. KRUG at 35 has become the greatest single personage in the public utilities field today—and his appointment has proved to be popular**

**K**RUG is a name headline writers like. It's short. It's eye-catching. And it's a name they will see often as time goes on.

Behind that four-letter name stands a "big hunk of man" with a keen mind, a likeable smile, a large heart—and a huge handful of power. He is J. A. Krug, former manager of power for T.V.A. and now one of the five top men in W.P.B. (The others are old enough to be his father!)

When the W.P.B. cards were reshuffled continually during February and March, although he was only 35 years old and little-known to the general public, Mr. Krug came out on the topside of the deck. He was the "ace in the hole" (some folks said) that Donald Nelson had been holding to throw in when Ferdinand Eberstadt was discarded.

His rise from "another W.P.B. executive" to one of the top men was rapid. On February 13, 1943, when Donald Nelson created the Office of War Utilities and chose Mr. Krug as its director, he became the greatest single personage in the public utilities field today.

Then, on March 3, after the depar-

ture of Mr. Eberstadt, Mr. Krug was named vice chairman in charge of materials distribution and chairman of the powerful W.P.B. requirements committee. In effect, he holds the strings that direct the important Controlled Materials Plan, under which all industry must operate.

Mr. Krug today is the man to whom the 14 "claimant agencies"—Army, Navy, Office of Civilian Supply, and others—must look when they need more materials. It is his responsibility to see that a steady flow of raw materials goes into the

right industries at the right times.

Some folks would say *that* alone ought to be enough to keep one man busy, but in addition, as director of the Office of War Utilities:

**He has charge of all the country's electric power.**

**He has charge of all natural and manufactured gas used in generating power, heating homes, or supplying industry and business.**

**He has charge of all water power.**  
**He has charge of all communications.**

When he must, Mr. Krug can supersede the Federal Power Commission, the Federal Communications Commission and all other policy-forming federal utility bodies, as well as hundreds of city and state bodies. He *has* the power.

From him may come such things as dim-outs in your inland city; orders that may require business to maintain lower temperatures in buildings; rules that may require cities to take new measures to assure an adequate water supply; directives that may prevent your calling long distance at will.

A decade ago, Mr. Krug held a comparatively minor job in a Wisconsin telephone company. He has come far—but fast!—and is likely to go further faster. His life implements the belief that a big man can still do big things in a Big Government.

In spite of all this, Mr. Krug has received little press notice, and no criticism whatever from those who regard anything that comes out of T.V.A. as anathema, or from those who think anyone who makes a success in life is a bloated reactionary.

The lack of public outcry seems predicated on the general agreement that Mr. Krug's main purpose now is to win the war without mixing peacetime motives with war-time policies.

"His only goal," says a recent interviewer, "is to get us through the war without a power shortage."

Although Mr. Krug believes that T.V.A.—and, by inference, at least, public power—is "a good thing for the country," he recently allowed a private power company in the West to continue building new generating facilities, although Secretary of the Interior Ickes wanted the same critical materials for a public project. Mr. Krug considered only one thing when he made the decision:

"Which improvement would be of most use to the war effort?"

Satisfied that the private power company's new capacity was more urgently needed, he acted without hesitation. He would have done the same if the reverse had been true.

"It's the same when he hires men," according to those who know him. His first question about a potential employee is: "How efficient is he?" Next, "How eager is he to win the war?" His political views don't matter.

That is one reason a man like Curtiss Calder, president of American & Foreign Power Company and \$1-a-year former director general for operations of W.P.B., can say:

"I'm glad to know we can get men like Krug to work in W.P.B. I disagree with his ideas about public power,

(Continued on page 62)



# The Army Pays in Cash

By A. H. SYPHER

**BIGGEST** current auditing system in the world handles foreign currency with same facility as dollars in paying soldiers and suppliers

**T**HE manufacturer or supplier who did a big job for the Army in the World War I production drive often found it was a still bigger job to collect for it.

"Sure, we ordered it—but we don't pay the bills," was the frequent answer to war contractors who stood bill-in-hand, a little uncertain just where the money for the next pay roll might be found.

Many found it only after personally searching out the department, bureau, or agency that happened to be disbursing the appropriation from which their particular product was being bought.

Contractors squawked. By 1918 they were roaring. Congress heard the roar and began an investigation of war contract payment procedures and delays. Then the war ended.

But Congress had heard enough to convince it that something should be done. It passed a law in 1920 creating the Finance Department. Today that 23-year-old branch of the service is getting its first war-time test.

The testing ground stretches around the world, along every battlefield where our soldiers are fighting, as well as along the homefront where the costs of the war are measured, and met, in dollars and cents.

Despite the fiscal-sounding name of their branch, officers and men wearing the diamond-shaped emblem of the Finance Department have been cited for meritorious service in action. Some have been lost, and some are known to be prisoners of war.

Chief of Finance is Maj. Gen. Howard K. ("Tubby" to old friends) Loughry. His job is to pay every soldier in the American armies—in Fort Sill, Okla., or under fire in Tunisia—and to pay every bill the War Department incurs, for Flying Fortresses or



U. S. ARMY  
SIGNAL CORPS

**Getting his pay in the money of the country may puzzle the American doughboy but it keeps local people friendly**

for fresh vegetables grown by Galapagos Islands natives and consumed by American troops.

And to pay them on time!

To do these things he is spending at the rate of about \$4,000,000,000 a month and, to keep the record straight, he is operating the world's largest current auditing system. Even his sidelines are record-breakers.

## Peace-time experts help

**THE** largest life insurance business ever built is operated by the Government. There are two companies, the National Service Life Insurance Company for World War II personnel, and the United States Life Insurance Co., left over from World War I.

Together, these companies have more than 5,000,000 subscribers and more than \$38,700,000,000 of life insurance in force. The Finance Office collects the premiums and handles the attendant auditing.

In charge of the insurance branch

is Maj. Robert Maclellan of Chattanooga, pre-war vice president of the Provident Life and Accident Insurance Co., and also an example of how the Chief of Finance has called on peace-time experts to handle war-time jobs.

Major Maclellan's force occupies but a small part of Washington's huge Temporary Building X, which stretches away from the bank of the Anacostia River. Occupying the rest of it are a few score officers, about 5,000 civilians, and a mass production line of bookkeeping machines. Here the record of the \$4,000,000,000 a month is kept straight.

Approximately one and a half tons of cash vouchers flow into this building daily from the scattered fighting fronts, from training camps and outposts, and from the offices where war contract bills are paid.

They come by train, by boat, by air. Occasionally a bundle must be studied carefully because its figures have become blurred by salt water. Others



show signs of fire and high explosives.

These vouchers start at once through the accounting lines. In the course of the process four separate checks are made to weed out errors.

"But a few creep in anyway," said an expert accountant with a captain's bars on his shoulders. "Then we go after them. In a bank the books are balanced if they come within a few cents of an exact balance. In some banks the limit is a dime. In others, a dollar. In some they have a balancing fund. But we must balance to the penny."

Envision the pay rolls of millions of men, with deductions for laundry, allotments for families, payments for War Bonds, premiums for insurance, allowances for rank, and you get an idea of the intricacy of the accounting problem.

Then add the bills for all the things Armies use, food, clothing, equipment, shelter, arms and ammunition. Realize, too, that all these things are paid from 370 separate appropriations approved by Congress, and each expenditure must be charged against the correct appropriation.

Then you have an idea of the job of Col. J. W. Clark, chief of the accounting division.

"We keep all our accounts on a cycle system," he explains. "The accounts of each disbursing officer are kept in eight-day cycles and, within 20 days after the end of the month, we can tell exactly how much has been spent, how

each unit stands and how much is left in each appropriation. We must make allowances, of course, for vouchers that fail to reach us because of transportation difficulties."

### 2,500,000 items monthly

BEFORE the war Colonel Clark was chief of the Treasury Department's field supervision. An expert in corporation accounting, he was called to the Treasury in 1935 to set up and direct an accounting system that would keep a running check on federal emergency relief appropriations. The system he has established in the Finance Office is a replica of his Treasury system.

It handles 2,500,000 items each month.

War-time growth of the Office of Finance has been enormous, but it still is the Army's smallest, and perhaps most exclusive branch. Finance officers are to the Army as bankers are to civilian population. There are indications that the Finance Office intends to maintain that position.

Banks, insurance companies and accounting firms have contributed heavily to the Office's war-time growth from 140 officers and 400 men, plus a few thousand civilians, to its present size of 2,529 officers, 14,000 enlisted men, and 15,000 civilians.

Officers and enlisted men assigned to Finance are trained first as soldiers. Then they study army finance. Subjects taught at the three finance schools include organization of the department, pay and allowances for enlisted men and officers, travel allowances, coordination between procuring and paying agencies; civilian employees, civilian components, organization and operation of disbursing offices, public funds, accounting, property accounting and auditing.

The Finance Office assigns a lieutenant colonel to each Army division (of about 12,000 men) as it prepares to go into action. A captain is assigned as the lieutenant colonel's assistant. A warrant officer and 17 enlisted men complete the divisional Finance Office group. This organization meets the division's pay rolls and bills, wherever it goes.

The divisional finance officer is bonded. Held personally responsible for the unit's funds, he starts out with the knowledge that long after the war he may be called to account for errors in his papers or his funds. To him is assigned a disbursing symbol which he uses in drawing against the United States Treasury. He takes along enough cash only to meet the division's obligations en route. Reaching foreign territory, he establishes a

*(Continued on page 60)*

**Finance officers operating with troops go everywhere the soldiers go. Several have been killed in action and others are known to be prisoners**

U. S. ARMY SIGNAL CORPS





# When peacetime dollars go to war

**I**N PEACE OR WAR, life insurance dollars are *security* dollars . . . but *security* has different meanings.

In peacetime, security means freedom from worry...protection of your loved ones against the loss of their breadwinner...education for your children . . . retirement in your own old age...and those standards of living which are synonymous with America at peace. Helping to guarantee those standards is the peacetime job of life insurance.

But in wartime, *security* takes on a more fundamental meaning. It becomes the difference between freedom and slavery—for it means the security of our nation itself against foreign domination. Without this security, other kinds of security are meaningless.

So, in wartime, the peacetime dollars of life insurance become war dollars. Invested in Government Bonds, they help to buy planes, tanks, ships, guns—all the weapons we need to keep this nation free.

In the words of the Hon. Marriner S. Eccles, Chairman of the Federal Reserve System: "Insurance companies are large investors in

Government Securities so that the bulk of savings put into the insurance companies in the form of premiums thus helps in financing the war. Accordingly, I feel that, next to the purchase of Government savings and War Bonds and Stamps by the public, investment in life insurance is particularly to be encouraged at this time."

Other life insurance dollars, invested in American industry and agriculture, continue to work in war just as they worked in peace, to help finance transportation, the production of power, steel, chemicals, oil, food, and other materials now more essential than ever.

Thus in war, life insurance dollars assume the added responsibility of safeguarding the security of the nation, at the same time continuing to guarantee the *security* of your home and family.

Since Pearl Harbor, the life insurance companies of America have invested nearly \$3,000,000,000 in United States Government Bonds. In this same period, Metropolitan has purchased about \$540,000,000 of United States Government Bonds.

BUY WAR SAVINGS STAMPS — FROM ANY METROPOLITAN AGENT, OR AT ANY METROPOLITAN OFFICE

75th ANNIVERSARY 1868-1943

**Metropolitan Life Insurance Company**  
(A MUTUAL COMPANY)

Frederick H. Ecker, CHAIRMAN OF THE BOARD

Leroy A. Lincoln, PRESIDENT

1 MADISON AVENUE, NEW YORK, N. Y.





# Customers Wait on Themselves

By SHIRLEY WARE

A HOST of retailers, taking seriously O.P.A.'s "help customers to help themselves," are converting their stores to self-service. Department stores seem to have made more progress in the effort than any other one retail group. In addition to cooperating with the Government, merchants find that they are helping to solve their own employment problem and lowering selling cost as well. Many ideas have come from Canada where stores, facing the difficulties of wartime merchandising before we did, have had self-service on trial for more than a year.

A survey recently completed by Milton Reynolds and Franklin Lamb of Printasign Corporation, Chicago, revealed that more than 16 prestige stores are using some form of self-service and hundreds of others are considering it. Although methods differ, enough generalities exist to make standardizations possible. Department stores, generally, favor "self-selection" rather than "self-service," with

**RETAILERS find that cafeteria principles help solve employment problem, don't cost prestige**

the thought of retaining their prestige and keeping away, as far as possible, from the supermarket-turnstile method.

Self-service, for the prestige store, can be classified into three distinct methods of operation:

First, and that considered most successful, *Self-Selection*; second, *Semi-Self-Selection*; third, *Customer Write-Up of Order*.

Some stores combine two or more methods, fitting the pattern to the merchandise. In *Self-Selection*, no salespeople are used. *Semi-Self-Selection* and *Customer Write-Up of Order* retain a few salespeople.

To convert to self-selection the "all out" presentation of merchandise has proved most advantageous. This of

course requires more display space but remodeling of fixtures and vertical displays on walls, pillars, and fixtures accomplishes this. The idea is to get the merchandise out where shoppers can see and feel it. Existing fixtures must be remodeled (Washington order) by the store carpenter or architect. Plywood or compoboard replaces or covers old framework and drawer fronts are ripped out to produce open shelf spaces. Counter tops are used for stock selling displays while the lower portion is given over to forward stocks.

When these fixtures are pushed together in the aisles to form closed bays and leave behind-the-counter cases free for additional display. All fixtures should be kept flexible to facilitate re-



Fixtures are pushed together in the aisles to form closed bays and leave behind-the-counter cases free for additional display. Flexibility facilitates rearrangement if bottlenecks develop



every branch of the Armed Services uses the telephone. No. 2 of a series, Submarine.



Five thousand miles from home Bill—Torpedoman—is keeping a date. Weeks of waiting, days of watching, hours of hiding under the sea, all for the moment when he reports over his wartime telephone, "All tubes ready, sir!" There'll be other dates, Bill—better ones—in the kind of world you're fighting for.



**Western Electric**

IN PEACE...SOURCE OF SUPPLY FOR THE BELL SYSTEM.  
IN WAR...ARSENAL OF COMMUNICATIONS EQUIPMENT.





arrangement when bottlenecks develop or stocks increase or diminish. Merchandise is classified according to size, price or kind with every item clearly price-marked.

The salesperson's story is told by signs. Other signs are needed to direct the shopper who has made a selection to the wrapping desk. Some stores supply shopping bags or baskets which are collected from the customer at the wrapping desk to be used again. It is found that the signs need to tell two or three features about displayed merchandise that are not immediately obvious.

The wrapping desk must be streamlined because, although the customer likes to shop in a leisurely way, she wants to hurry after her selections are made. If sales checks are to be made out, checkwriters will be needed who will also take payment or enter

ish stock and to assure good house-keeping. Roving supervisors are the only highly paid and trained employees in the operation. They cover the floor, helping customers, checking on displays, stocks, and every procedure.

### Customer writes own order

SEMI-Self-Selection is similar as to display but salespeople are needed to complete transactions after customers have decided upon purchases. It is possible for one employee to cover several stations if fixture arrangements are open and if displays and signs tell the selling story. In departments where goods are bulky, such as furniture, the store supplies pencil and paper and the customer notes the number of wanted articles then turns her list in at a central desk or to a

the attendant calls out the order number.

Self-Service in all its forms encourages "take-withs," thus cutting down delivery costs. Markdowns, that have long been profit-eaters in retailing, are lessened. Inventory taking is greatly simplified, especially when reserve stocks are arranged in the same classification as are stock selling displays. Complaints and returns by customers contending "misinformation by salespeople" are also reduced. Loss by theft has been reported infinitesimal, a lower per cent in fact than in stores which are now operating understaffed.

Stepping up the customer and increasing the unit of sale with related merchandise (suggestive selling) and with multiple prices—"musts" in sales personnel training of every progressive department store—are met with signs and displays. One store uses "Good, Better, Best" signs to grade merchandise which is separated into the three groups and priced in step-up manner. Shirt displays are augmented with ties and handkerchiefs and signs call attention to the ensemble, a point which the inexperienced salesperson might overlook.

These same items, and others that are "naturals" for multiple selling, carry signs showing multiple prices subordinate to single item prices. This is mail order catalog page technique which has been found to work well for Self-Selection.

### Problems for suppliers

MERCHANDISE that is fast depleted, such as hosiery and gloves, is often shown classified by size only. This method will gain favor as merchandise becomes more scarce and since price is less of a consideration today.

This new form of selling will of course affect the manufacturer whose packaging has been done with stockrooms and store-to-consumer delivery first in mind. If most merchandise is to be "taken with," individually prepacked cartons, excelsior protected, will not be required but packaged goods, ready to carry, will be time-saving to the stores. Labels will have to be larger and more informative, telling the quality story. Brand name merchandise will find competition in less known names since eye-appeal will be chief interest.

It is questionable if stores going over to this plan as a war merchandising measure will be willing to abandon it after the war. The smaller-than-department-store merchant, who will have less of a problem converting, might well look to self-service as his particular rubber raft in which to ride out the storm.



Signs tell salespersons' story and give prices. Customers select merchandise, then take it to central wrapping desk

charges. Some stores dispense with this step by using cashiers, who may serve also as wrappers, to ring up sales. In heavy traffic departments, checkwriters, cashiers, and wrappers may be needed but since this work is routine no heavy training program is required.

Stockkeepers are needed to replen-

salesperson who finds the goods for her.

A few stores find order desks popular. Merchandise is displayed on small signboards over the desk, each item identified and clearly price-marked. The customer writes up her own order, retaining a copy.

When the merchandise is wrapped,





## First Step toward the fighting front

It leads him to a good night's rest in a soft, sleep-inviting bed.

And that's the *least* that anyone can wish him—although the demand for so many sleeping cars to move troops results in occasional inconvenience to civilians

traveling Pullman in wartime.

We are grateful for the tolerance with which you accept the situation—for your understanding attitude that says as plain as words:

"He comes first with *all* of us!"

AN AVERAGE OF ALMOST 30,000 TROOPS A NIGHT NOW

# GO PULLMAN



★ Buy United States War Bonds and Stamps Regularly! ★

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# Employment in War, Why Not in Peace?

By GUSTAV STOLPER

Josh Billings once said that "It ain't that we are so ignorant, but that we know so much that ain't so." If this was true when Josh said it, it's doubly valid in this day of psychological warfare and global perplexities, when somebody cooks up a new fallacy every minute and serves it piping hot.

There's the fallacy of the "have" versus the "have-not" nations. Hitler has carefully built up the proposition that Germany was forced into acts of desperation because the so-called "have" nations stripped her of her colonies. But the evidence is now available that Germany's colonies were always a liability, never an asset; that their cost of administration was many times the returns that could be exacted from them. Germany's own estimate of the value of her colonies is shown by the fact that only two per cent of her foreign investments were ever made in her colonies.

Some would have us believe that the roots of all wars are to be found in economic causes. Yet the facts show that not one major war in the past 150 years originated in the frictions or rivalries of economic interests.

Remember when we were witch-hunting for international bankers on the theory that they were war-mongers, and that foreign investments led to war? But the same people contend that Britain put off fighting Germany as long as she could because Neville Chamberlain and his "Tory appeasers" didn't want to endanger their investments in Germany.

Dr. Gustav Stolper several years ago started tracking these and many other fallacies to their lairs, and he has a fine time blasting them to bits in an exciting, zestful book, "This Age of Fable," published by Reynal & Hitchcock, New York. He went to original sources in the capitals of Europe and elsewhere, for his facts, and has come up with a book which one reviewer describes as ringing out as "clearly as church bells on a frosty night."

He shatters the clap-trap of the "production for use" school

with a single definition: "Producing for profit expresses the motive that causes man to produce. Producing for use expresses the purpose of production." All production is for use, says Dr. Stolper, in effect, so what is all the shooting about?

Dr. Stolper's work is the kind of vigorous commentary on the state of civilization, William Henry Chamberlain says, that John Locke or John Stuart Mill might have offered if they had lived in this century. Its power is such that another reviewer compares it to Ortega's "Revolt of the Masses," adding that Dr. Stolper's book might bring about the same result in our national thinking.

We journeyed to New York to meet Dr. Stolper and found him an engaging fellow who thinks and talks as he writes—with deep earnestness. A native of Austria, he holds a Doctor of Law and Economics degree from the University of Vienna, and for many years edited and published financial journals in Germany. His "German Economy, 1870-1940," is required reading in many universities here and abroad.

Dr. Stolper knew far in advance what Hitler's coming to power would mean to Germany and to the world. When Der Fuehrer marched in, Dr. Stolper bowed out. He had been head of the German government's research and statistical division in the last war, and represented Hamburg in the Reichstag from 1929 to 1932. An ardent believer in democracy, Dr. Stolper came to the United States in 1933 and became a naturalized citizen of this country which has found his grasp of German economics most useful in our whole war effort.

This background lends great weight to what Dr. Stolper has to say here about a current fallacy: That if democratic government can provide full employment for purposes of war, ergo, Q. E. D., it can do the same for purposes of peace, simply by controlling the economy. This proposition is another example of the loose thinking which befogs our consideration of post-war policy.

THE EDITORS

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

THE so-called full employment with which the Nazis and the Bolsheviks paraded their systems to an admiring world was in fact nothing but an anticipation of the same accomplishment in the democratic world during the war. War economy started in Russia in 1931, in Germany in 1934. For America, total mobilization under governmental guidance is new. There was nothing of that sort in the last war. The war of 1917-18 was, so to say, kept on the periphery of American life; it never penetrated to the core. Total mobilization is rapidly transforming the structure of the American Government, the American State. Never before did Washington wield comparable powers.

The war administration so far is makeshift and improvisation; it has not yet constitutionally undermined the American system. But the longer the war lasts, the stronger will grow the tendency to regularize the improvisations, to transform the

makeshift into a permanent structure. That the Government could create full employment (and more) for the purposes of war will not readily be forgotten. So, an easy conclusion suggests, why should it not be able to do the same for purposes of peace?

While the war lasts, people are being told what to do and not to do. If the Government needs the automobile plants for tanks, guns and aircraft, automobile production goes out. If steel is needed for munitions, we may have to grow beards for lack of razors. If a blackout is ordered, the military do not care how much income the power company loses. On all raw materials the Army and Navy have first call even if it takes the entire supply. In this democracy we try to achieve as much as possible by appeal to voluntary cooperation. If we don't get adequate results, we resort to compulsion without too many qualms. This is the very nature of any planned economy.

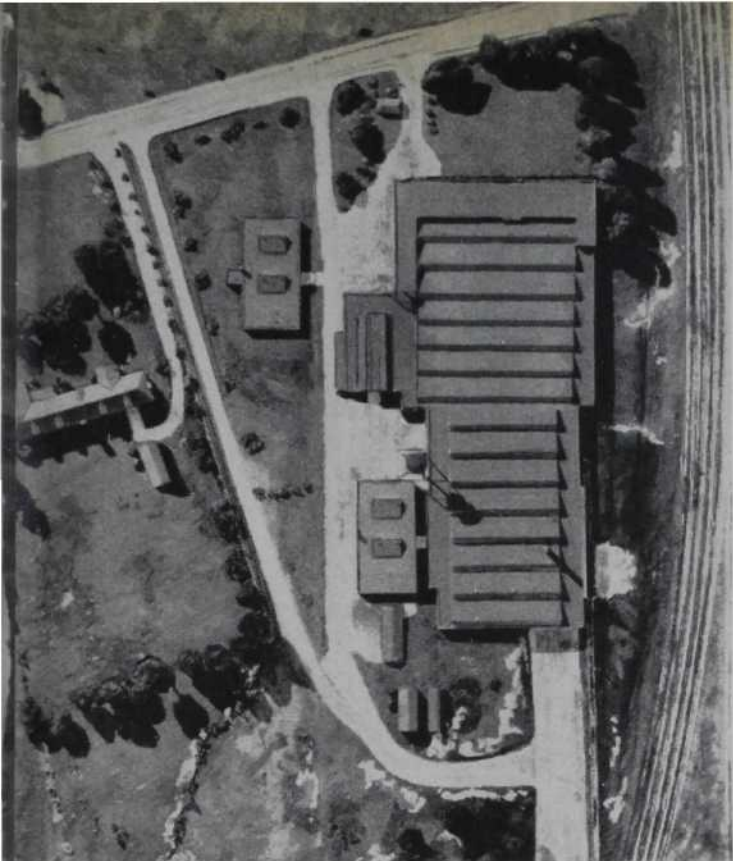
It is not solely the question—

though an important one—whether any government can be wise enough to plan the lives of the millions of the governed; we have also to ensure the execution of the plan. No plan can prevail if those whom it concerns are free not to obey it. Of course, we can plan all our production and allocate our resources to something or other if the consumer has simply to accept what he is offered and to do without if the plan does not supply him. This is the essence of all the Five-Year-Plans and Four-Year-Plans; it is the essence of an all-out war economy. It is not compatible with peace, prosperity and liberty.

On the day the fighting ends the one dominating customer withdraws from the market: the warring Government. Into the vacuum, private customers, repressed for years, pour with an immense variety of demands. The markets which are now shut down will be reopened. Price and costs determine

(Continued on page 68)





**NOW YOU SEE IT.** Before the camouflage experts went to work, this factory—a model, for test purposes—was photographed from the air on conventional panchromatic film. The bomber's eye would see what you see—a perfect set-up for destruction.



**NOW YOU DON'T.** With camouflaged materials—false structures, netting, cloth streamers, paint, and artificial trees—the experts have fooled the camera, and the bombardier. To the aerial camera loaded with panchromatic film, even the marks of erosion on the slope by the railroad track have disappeared.

## Kodak Infrared Film spots the “make believe” of enemy camouflage

**CAMOUFLAGE** is the highly developed art of pulling the wool over an enemy's eyes. . . an art which is finding old methods ineffectual, in this war.

This is in a measure due to Kodak's development of a type of film whose vision goes far beyond that of the human eye.

Natural grass and foliage contain chlorophyll—Nature's coloring matter. Camouflage materials lack this living substance. Chlorophyll reflects invisible infrared light rays—and Kodak Infrared Film registers this invisible light, making the natural areas look light in the picture—almost white. In violent contrast, the “dead” camouflaged areas show up dark—almost black—in the picture.

Moreover, Infrared Film is able to penetrate through the haze of a “low-visibility” day, and return from a reconnaissance flight with pictures in clear detail. Here again it far exceeds the power of the human eye.

Working with our Army and Navy flyers and technicians, Kodak has carried this new technique of camouflage detection to high efficiency—and has, for our own use, helped develop camouflage which defies detection . . . Eastman Kodak Co., Rochester, N. Y.



**BUT HERE IT IS AGAIN.** With Kodak Infrared Film in the aerial cameras, pictures like this are brought back from an observation flight. On Infrared pictures, the false, “dead” camouflage materials look almost black. The natural landscape is unnaturally light. A trained cameraman, with one look, knows where the bombs should strike.

Serving human progress through Photography



# Capital Scenes... and



## What's Behind Them

### Super-Cabinet vs. Congress

THE MAKINGS of a rumpus are being assembled on Capitol Hill. They may blow away in a wind of tolerance. It might happen that neither the Administration nor the congressional leaders involved will lose their tempers, talk about smears, or charge that the war effort is being impeded. This height of discretion can be achieved—

"It's time to settle down and play ball," said one of the calmest men on The Hill. "I think we will. This is a different and a stronger Congress than we have had recently."

But the fact that the makings are on hand is significant. It is an outgrowth of the determination to restore Congress to its rightful place in the American scheme of government. Quoting the same man:

"Congress will not write the peace terms. But Congress will make the frame inside which the terms must fit. That means both Houses."

### A revolution in reverse

PRESIDENT Wilson was honest when he told European statesmen that his people would accept his peace terms. He believed he had the game in the bag. The Europeans believed him, because the lack of European knowledge about the people, government and traditions of the United States was supernatural. It is hard to

believe now that men who had been engaged in governing, or at least in taking a shot at governing, ever since they were big enough to tie their own shoes could not have absorbed some knowledge about us. Wilson failed to consult congressional leaders. The Versailles Treaty was accepted by circumvention but the League of Nations was tossed out the window. If the House and Senate can get together on the general plan of the future peace terms, a repetition of this fiasco may be avoided. Maybe the two houses can.

### It could happen here

THERE is no suggestion that either house wishes to interfere with the conduct of the war. Oh—of course—an inquiry here and there. Congress definitely does not like the way some of the money has been spent. The Truman committee's report on administrative inefficiency is almost a Bible in congressional offices. But it is standing solidly behind the Executive so far as plan and scope go. Of all the billions to be spent in 1943, 94.8 cents

out of each dollar will go for the war and only 5.2 cents for strictly peaceful purposes. No use in threshing over the straw-man power problem and the rapidly reforming O.P.A. or the other current items. A committee of inquiry may be ordered to find out what's the matter if too many more things go wrong. But the leaders hereinbefore mentioned propose to have a look at the peace terms before the mortgage is signed.

### That super-Cabinet trouble

ONE reason is that what is being called the super-Cabinet has what the advertising talent used to refer to delicately as B.O. For ten years Congress and most of the men of the super-Cabinet have been intimate. Not intimate in the affectionate sense. The members of the super-Cabinet shifted from time to time but they shared a desire to wool Congress around. Some of the members have been professors and, while a professor is one of nature's noblest creatures, a few years in a schoolroom are likely to spoil him for the everyday task of getting along with folks. Professors are also certain of themselves while a Congressman is likely to be at heart a rather tired man who is trying to grope his way toward a satisfactory compromise. This is telling a tale out of school, but—

### How appropriations are born

"I WAS told to make out the request for money for one of the bureaus," said an administrative officer.

He knew nothing about the work of the bureau.

"Ask for twice what we really need. That's what we always do."

Being a smart man, he invented some new activities. Then he worked out so good an argument that he convinced himself. Then he made his argument in the double-talk of which specimens may be trapped in almost any one of the bulkier pronunciamentos or questionnaires of recent issue. So he got almost the full amount instead of the half which every one had looked for.

### No doubt the bias is unworthy

SUPER-CABINETS are nothing new in our political history. T. R. had a kitchen Cabinet. Hoover had an oleo of handball players. Wilson had a one-man Cabinet but House was good while he lasted. Coolidge had a couple of men from Boston and Harding in the end regretted that he had relied on some men from Ohio. But the men of this—and all precedent super-Cabinets—have few warm friendships on

Capitol Hill, for the reasons hinted at. The situation is thickened up by current developments. The "boot" Congressmen—thanks for the word, Marines—think that, as first termers, they are being slighted. One southern group has a quarrel over the Allred appointment and another thinks the South has been treated like a grass widow's stepchild. And so on and on.

### Men who may be at the table

NO criticism—or little criticism—is heard of the lend-lease operations since Ed Stettinius made his report. His candor aided understanding. But Harry Hopkins is suspected of being behind the arras. One of the great men who may not be quoted except by permission once said:

"Harry comes back from London more British than Churchill."

Hopkins is regarded as the Prime Minister of the super-Cabinet. James Byrnes is next in rank but, since he became known as the Assistant President, he has been on a hot spot. As a member of the Supreme Court he wrote the decision which gave labor racketeers a free hand, and Congress is now trying to find a corrective for it. Judge Sam Rosenman of New York is regarded as the architect of legislation loaded with double talk. Perhaps he is not but the suspicion makes Congressmen uneasy.

### Ground on which Cohen bled

BENNY Cohen was the slickest lawyer on the premises a few years ago but when Congress began to sniff at his bills he dropped almost out of sight into just a job. If his partner, Tommy Corcoran, came out for any bill he would probably ruin it. Unlike the Corcoran-Cohen team, however, Rosenman is deeply subterranean.

Henry Wallace is liked personally but thought to be too full of the milk of human kindness to be safe at a peace table. Secretary Hull is well liked by both Houses but is not in the super-Cabinet. He has kicked some of its ideas into fragments. Admiral Leahy has the Navy man's habit of obedience. Sumner Welles is a Sunday afternoon member and has made some gaffes as a diplomat. Bernard Baruch is well liked but most think he is only a volunteer. Other men are in-and-outers.

### House will have its say

UNDER the Constitution only the Senate has authority to approve or disapprove a treaty. But the House is an important body nowadays and is in no mood to sit quietly on its numerous chairs. When victory is definitely in sight it is regarded as probable that a concurrent resolution will be adopted which will in effect instruct the Administration on the limits of the peace treaty to be signed by the American treaty-makers.

Such a resolution would have the important value of lifting any veil which may still hang over the eyes of European diplomats. Even if no resolution is adopted by either or both Houses a lively floor de-





## The Goblin that works for America

THE INQUISITIVE alchemists of the Middle Ages were looking for silver. Repeatedly, they smelted certain ores and got a silvery-looking metal. But it was only *silvery-looking*. It never turned out to be silver. So the alchemists thought that a malicious spirit was thwarting them, and they called the strange metal Kobold, meaning goblin.

Today that same goblin, known in America as cobalt, has become one of this country's great fighting elements. Cobalt is alloyed with chromium and tungsten to make "Haynes Stellite" alloys which have the property of "red hardness." Metal-cutting tools made of these alloys keep on cutting even when red hot! Cobalt improves red hardness and toughness in other kinds of metal-cutting tools. Thus, cobalt has contributed greatly to the tremendous output of planes, tanks, guns, and other war materials.

Cobalt is also used to produce improved magnet steels. Permanent magnets of cobalt-tungsten steel are more powerful, and last longer. Permanent magnets are necessary in much electrical equipment.

This country's cobalt formerly came from Belgium, where it was refined from African ores found in the Belgian Congo.

As war clouds loomed, and as accelerated American industry made rapid inroads on the stockpiles shipped out of Belgium during 1938 and 1939, ELECTRO METALLURGICAL COMPANY, a unit of UCC, designed and built facilities in this country for the Belgians. ELECTROMET now operates these facilities so that HAYNES STELLITE COMPANY, another Unit of UCC, and other American companies can have the cobalt they need for essential war work. Operations began in 1941. Today, these facilities annually produce more cobalt than was ever imported in any year previously.

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**RED HOT... STILL CUTTING!**  
Faster production of metal equipment of all kinds is made possible by high-speed metal-cutting tools containing cobalt.



**SIGHTED SUB!** Better radio transmitting tubes and improved electrical equipment are assured by cobalt.



**CALLING HEADQUARTERS!**  
Telephones and other electrical equipment require permanent magnets. The better magnet alloys contain cobalt.



**WEAR-FIGHTER!** Planes fly farther with fewer repairs, thanks to exhaust valves protected with "Haynes Stellite" cobalt-chromium-tungsten alloys.

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## Arrested... *for wasting a candybar wrapper!*

A STATUTORY order makes it a punishable offense in England to waste paper wantonly—even a candybar wrapper. In England every bit of waste paper must be disposed of through a buyer or collector. These drastic rules are required because pulp, from which paper is made, is vitally necessary in manufacturing explosives.

Paper *is* shells, bombs and bullets! At the present time a large part of the United States production of paper pulp goes to nitrating plants where certain elements of the pulp are removed and formed into flakes or pellets,

called nitrate cellulose. This material then becomes part of the finished explosive used in shells, bombs and bullets.

To conserve paper pulp for military needs, the U. S. Government issued a directive curtailing paper production.

It now becomes the patriotic duty of every industry, firm, and individual to dispose of waste paper only to collectors or buyers of waste paper. They will see to it that your waste paper gets to the proper places for reprocessing. It will be made into new paper to conserve pulp for the explosives needed to win this war.

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bate is certain in advance of the treaty-signing. This of itself would put all hands on notice. European statesmen know more about us than they did 25 years ago. It has the further advantage that the business of treaty-making would be a part of every voter's business. The House knows that, if it gets its hands on the treaty, that document had better be good. The political life of a Congressman is precisely two years.

### Form not yet fixed

IT IS too early, by perhaps 18 months, to say what may be the content of such a resolution, whether adopted by one or both houses or only aired on the floors. The conversations are as yet general, more or less casual, and far from any effort at reaching an agreement. It may be assumed that the aim is to ensure the world against a repetition of the present murder-fest. Whether that insurance will be a league of the Allies of today, backed by naval and military force, or an informal understanding between Britain and the United States that their armies and navies shall be kept in working order and ready for joint action, or an actual policing of the world is being talked over but nothing more than that. The only sure thing seems to be that the Nazis and the Japs will not be in any plan. The important feature is that adoption of such a resolution is being considered.

### Non-partisan action hoped for

ON THE WORD of some of the participants, party politics has not yet entered the conversations. Congress is absolutely unanimous in its determination to do everything asked of it to win the war. This is a statement of literal fact. Not a man in either house would purposely impede the war effort. The conversations, too, are an evidence that Congress is certain the Allies will win. This is not glary-eyed optimism. The price to be paid will be heavy. But congressional leaders get their information at first hand from Army and Navy chiefs who know the situation and not from the myriad more or less official spokesmen. The present thought is that the Nazis will quit in 1944 before Germany's strength has been so much impaired that she will not be listened to at the peace table. The fighting chiefs say that no peace will be secure unless Germany lays down her arms, the country is occupied, the stolen goods recovered as far as possible, and those guilty of crimes punished. They believe that Germany will agree rather than go through the winter of 1944-45. They anticipate that desperate and bloody fighting will come first. The Nazi armies are still the largest force in Europe.

### About those peace terms

ONE senator who usually knows the score said that Russia has already written her peace terms on the wall. She will recover her 1939 frontiers and add any bit of land she thinks will round them out. A part of

Finland, for instance. She has already assured Czecho-Slovakia of future freedom and painted a part of old Poland an anticipatory red. No one can do anything about it, even if any one were to wish to:

"We certainly would have no desire to fight Russia to protect the little Baltic states. They would be more secure as a part of the Soviet republic than as bait smeared with honey."

### Realistic view of things

BRITAIN, he said, would not be so inconsistent as to demand that she retain India in the empire and yet try to deny to Russia lands she considers her own. He thinks the realistic American people are willing that Russia should have what she wants to make her borders secure. After all Russia has been winning the war in Europe. He thinks we did not go into this war for any hifalutin' ideas, but to save our necks. His letters indicate the writers' hope that we will keep Russia as a friend. There is definitely no suggestion in any informed quarters that Russia will join Britain and the U. S. in policing Europe when the war is won. When that time comes, Russia will do what seems best to her. There is no present hope Russia will help us clean up Japan after the Nazis are potted.



### No bias against administration

ALL concerned hope that the resolution, whether adopted or only debated, will not be attacked as an anti-Administration move. On the word of the prime movers it should be accepted as definitely helpful, as eliminating uncertainty as to the popular reaction. It is pointed out that, even if the Senate were to approve a peace treaty, the House could nullify it in effect through its control of appropriations. Leaders in both houses are determined to restore Congress to that coordinate responsibility in government which—by the word of its foremost men—it weakly abandoned during the past ten years. They do not anticipate opposition from the President even if some of the administration underlings develop indiscretion, because his veto power leaves him at all times in a commanding position. A piece of unwise legislation could not win the two-thirds of both Houses necessary to override the veto. The voters are turning the heat on Congressmen of both political parties.

### Congress may write history

HISTORY-MINDED Congressmen on both sides of the lane say the 78th Congress may prove to be the most significant session of the national legislature since the Civil War.



"If we can induce the greenhorns and the bully boys in both parties to pipe down—" As these men see it, Congress' main job—apart from getting on with the war—is to clean up. The bureaus are necessary to

the orderly conduct of government, but they must be brought under control. The executive has so far departed from the earlier form of government that an administration law officer officially ruled that, if the President issues an order which is not supported by law, it must stand as law unless Congress takes affirmative action against it.

### Where's your typewriter today?

BYRD'S inquiry showed that the 48 agencies that replied had sent out 7,025 separate questionnaires. O.P.A. alone sent out 7,715,229 forms, not counting rationing forms and instructions. There are 150 planning agencies in the Government. One hundred are dealing with post-war plans. The War Department says it needs one typewriter to 750 men. It has asked for enough typewriters at this rate to equip an army of 344,000,000 men. We desperately need more men on the farms and in the factories and yet government offices are overstaffed by one-third. In Germany he's a mighty good young man who gets a plush job that can be filled by a war cripple. The lookouts say Congress will certainly compel longer labor hours if the Administration refuses. O.P.A. is practically galloping down the sawdust path to avoid a congressional shellacking. Fewer orders, written in words that people can understand, hardly any questionnaires, a housecleaning of useless, inefficient and arrogant employees, and a disposition to make a friendly best of an unpleasant job has been ordered. Unfortunately Administrator Brown finds the men he would like to get rid of are so swathed in red tape he can hardly find them.

He hopes for tolerance.

### And in the meantime—

IF YOU wonder why the people are red-necked about the stupidity and arrogance of some of the bureaucratic commissars be informed that—

One minuscular boss-let told a farmer who lives by his sheep crop that, if the weather was unfavorable, he should postpone his lambing season. Another said that egg ranchers do not play fair; "You do not report the eggs from your capons." Still another wanted a report on the condition of the country's female steers. These things may seem funny, but they are tragic as lost battles, because the men responsible for them are the men who have been getting in the way of a country trying to fight an uphill battle.



Even as farm leaders talk of the possibility of food riots this season in this rich country, it is reported that, all over the land, farm machinery has been frozen in warehouses until it cannot be available for the season's use.

Herbert Corey

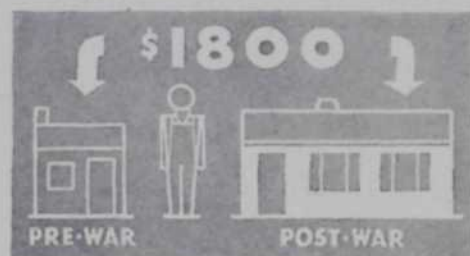


## POST-WAR HOUSING

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No longer a dream is a completely-equipped, soundly-designed, sturdily-built, two-bedroom home to sell—at peacetime price levels—for \$1,800. Today, it is an established, thoroughly-tested fact. Tomorrow, after the emergency, it will be available commercially.

Significance of the \$1,800 house is that, for the first time in its history, the building industry is prepared to provide a new home most Americans can afford. Hitherto, the 25,000,000 U.S. families with incomes under \$2,000 a year have been outside building's market—and living in second-hand or older dwellings, many of them substandard. The \$1,800 house is made possible by *engineered housing*.



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Engineered housing, of which Homasote Company's Precision-Built Construction is the leading example, makes conventionally-constructed housing obsolete. Homasote's method is *decentralized prefabrication*, developed over seven years at a research cost of \$300,000. . . Note "decentralized"—Homasote avoids uneconomical transportation costs, by franchising local prefabricators to use its system. Thus it works with and for, not against, established local factors in building.

Homasote Precision-Built Construction builds homes of any size, any style, anywhere. All Homasote Homes may be demountable—providing *movability* if the neighborhood deteriorates, *expansibility* if the family grows.



Proved in \$6,000,000 worth of pre-war, architect-designed private homes and \$30,000,000 worth of government war housing, Homasote Precision-Built Construction is the key to vast, post-emergency markets: low-cost housing, employee housing, realty developments in all price classes, etc. . . . For more details, write HOMASOTE COMPANY, Trenton, New Jersey.

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**HOMES**

# Why We Must Plan

By DR. EMERSON P. SCHMIDT

SO many diverse groups are engaged in "planning" that this word—like many another—has lost all definite meaning and may have no meaning or any meaning, depending on the user. Each person, by virtue of his background and immediate problems, gives the word "planning" his own meaning, as may be seen in the following:

1. To some, it means having a central Government assume major responsibility for production, employment, prices and income, perhaps a continuation of the controls that have come with the war.

2. Some persons think "planning" means a basic reconstruction of society under which the Government will not only assume responsibility for economic activity, but will own and operate the system.

3. To still others, it means that the Government, through public works, urban and river valley development, will graft upon the historic economic system a new kind of state-enterprise system.

4. Again, planning may mean the mere taking of an inventory of our problems so we will know what to look for.

5. Another group thinks of planning as an appraisal of the maladjustments which prevented active business in the pre-war period with a view to correcting the obstacles which then stood in the way and which in the post-war period again may stand in the way of a sustained high level of output.

We want to stress the last-mentioned type of readjustment problem: The essential conditions for economic expansion. This sounds somewhat vague, but the Chamber's Committee on Economic Policy is trying to put substance and concrete suggestions into useful form. This emphasis does not mean that other types of post-war thinking may not be worth while and important.

As a matter of fact, there is no such thing as no planning. A decision not to do anything about the post-war period constitutes the adoption of a policy—of drift and wait-and-see, and, perhaps, a policy of allowing oneself to become a victim of uncertain outside forces.

Planning is the opposite of improvising. It assumes that what we have or will have results from actions previously taken. It assumes a certain cause-and-effect relationship in society which is subject to voluntary control. Economic forces are not blind, as is sometimes implied, but are expressions of the human will. By taking thought of things to come, it is possible to influence the result. This in itself is all the reason we need for taking an inventory *now* of our

problems and devising tentative solutions.

For almost two years after World War I, we enjoyed feverish business expansion and inflation, but with no conscious over-all policy. In that period, the explosive forces of high money incomes from the war, spending war savings and filling deferred demand exhausted themselves quickly in an inflationary spiral which, if properly controlled, might have given us four to six years of prosperity, instead of two.

The deflation of late 1920 and 1921 brought needless suffering. Millions of men lost their jobs; business mortalities rose to new peaks and the inventory losses of many companies were so staggering that not all have recovered even yet.

#### Planning is going on

ONE company lost about \$1,000,000 a day for 150 days, while others suffered comparable losses in inventory. Had we understood more thoroughly the nature of the post-war period during the last war, we might have set in motion forces which would have avoided these losses and prolonged prosperity.

"Planning" is going on today, and not to engage in it simply means that we are not helping to determine the shape of things to come. We must plan with our eyes open, not adopt an ostrich-like policy and refuse to admit that plans are being made for the future.

The average person is not interested in principles or methods, but in results, although he should be, because "the end pre-exists in the means." However, appeals to preserve private enterprise, unless it is shown how this system is the way to get the best results, are likely to fall on deaf ears. For a decade or more private business has been on the spot.

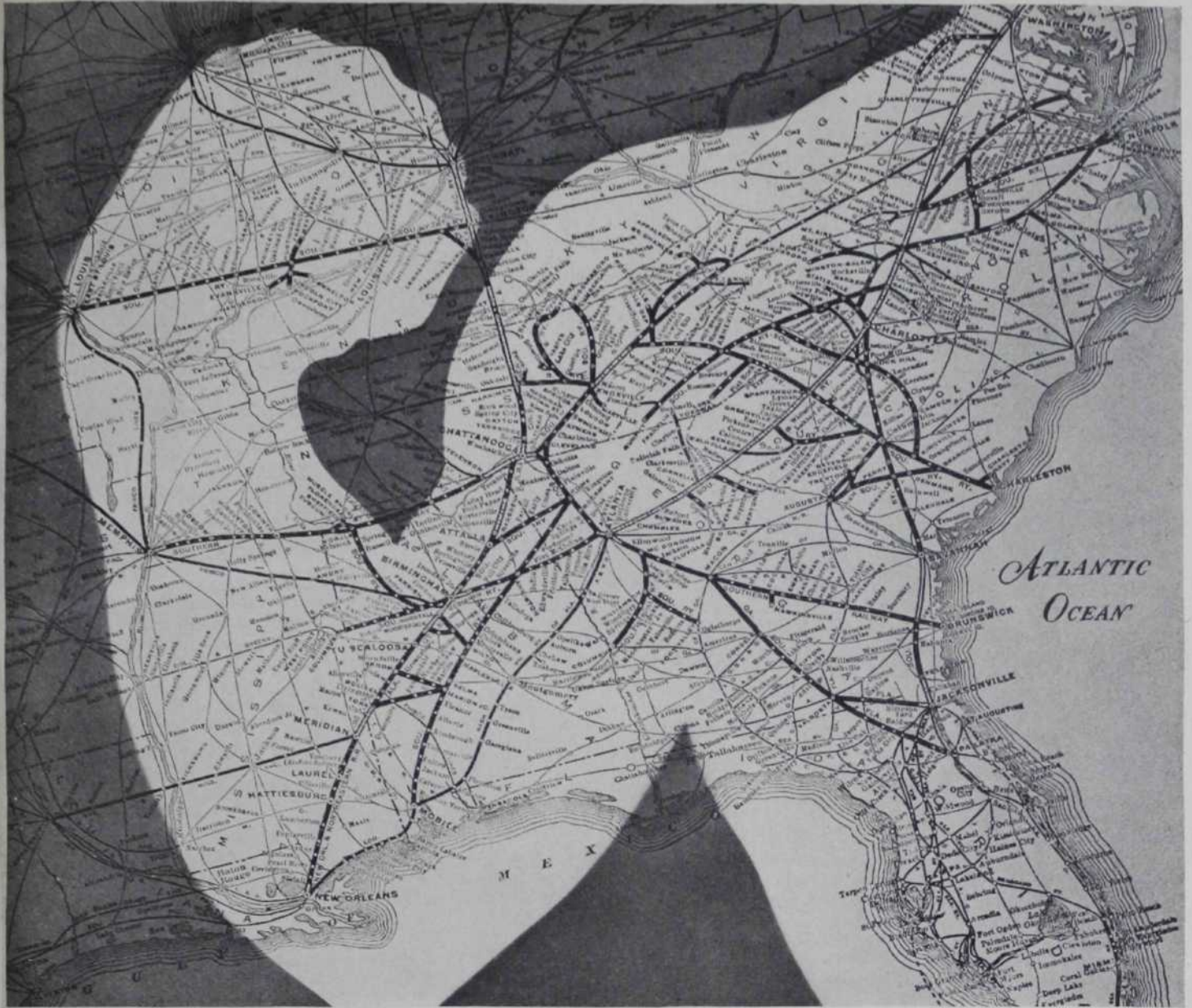
After the first World War, new economic systems came into existence in Europe and, unless American business is enabled to function effectively, once the war is over, people are likely to demand a system patterned more and more after some foreign system.

Under the modern industrial system, about four out of five persons must sell their labor for a livelihood. If they make no sale, they do not eat—except by suffering. Therefore, jobs and job continuity must be provided by the enterprise system if it is to survive.

Furthermore, the demand for economic security is enormous. Having 10,000,000 men unemployed is so wasteful of resources and so destructive of human values that ways *must* be found to sustain output and employment. Already, people are asking: If the Government can spend billions of dollars for war, why not do the same to create jobs and prosperity in peace-time?

EDITOR'S NOTE: An excellent series of studies on post-war planning is being prepared by the Committee on Economic Policy, Chamber of Commerce of the United States, under Dr. Schmidt's supervision. Readers wishing to be placed on the mailing list should write directly to him.





## Sinews of the South

Long before the war, the South had been showing its imposing strength. But that was only the beginning...

After the war, the South will take a leading part in the new world that will open up... a more abundant world made possible by today's remarkable scientific advances... a world of plastics, synthetics, new fabrics and new products.

The southern states are notably rich in the natural resources needed by tomorrow's technology. Southern timber, agricultural products, chemicals and minerals are exactly those required for the new processes.

Reaching into every part of the South, the great network of the Southern Railway System ties farm and forest and factory together into a compact industrial unit. Resources, labor, industry... and ready transportation... these are the strength of the South.

Today, the busy trains of the Southern haul troops and war materials. Tomorrow, these trains will keep busy serving the new world.

Look ahead... look South.

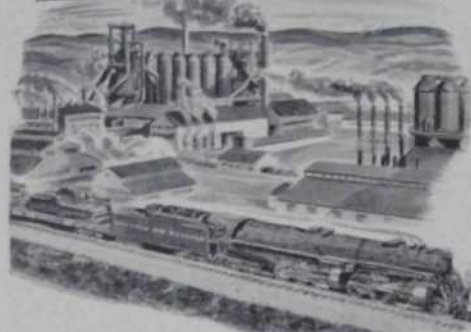
*Ernest E. Harris*  
President

## SOUTHERN RAILWAY SYSTEM

*The Southern Serves the South*



# TEAMED FOR THE BIG PUSH



To put fighting equipment in more places, in greater volume, and do it under more trying circumstances than ever before in the history of the world—is the job of American industry and transportation. Both are teamed for the United Nations' offensive strategy of global warfare.

Industries have quickly converted from a peacetime to a war-time economy.

Teamed with this hard-hitting dynamo of production are America's railroads. The uninterrupted, all-weather, mass transportation provided by the railroads is vital in planning, preparation, and launching a full-scale offensive warfare. For only over rails of steel is it possible to handle the mass movement of men and machines of war.

Years of practical planning and the expenditure of ten billion dollars during 20 years of peace prepared the American railroads to meet the terrific demands of this war. Today, the Norfolk and Western Railway and other railroads of the nation are working day and night to "Keep 'em Rolling" so that the armed forces of America and her Allies will not lack equipment and supplies for the "big push" that will deal the final, smashing blow to the Axis solar-plexus.

## Norfolk and Western Railway

PRECISION TRANSPORTATION

BUY MORE WAR BONDS

Although fallacious in many respects, this viewpoint must be recognized, and the conditions essential to meeting the challenge must be discovered and put into effect. In short, we must be interested in ways and means. Anyone can state the problem—but that is not enough!

The function of the enterprise system has been to gather together the factors of production—land, labor and capital—and to organize these into productive units. So long as the employer performed this function fully and consistently, he was not under serious attack. In the 1930's, for the first time, his social usefulness was questioned. In the post-war world, the extent to which this attack will be abated will be governed by the degree to which full and steady employment is provided.

If private employers cannot provide employment, the Government will attempt to take over this function. The American people do not want to see their Government turn employer—they are not socialistic. But, if they are convinced that private business cannot do the job, they will turn to Government. And if they do—can we preserve liberty and freedom?

When once the Government is the chief or the only employer and owns most or all the instruments of production, the issues at stake likely will be too great to be manageable by the democratic process. If we place upon government the responsibility of assuring jobs, incomes, and a high standard of living, that government must have *power* and *authority* to command, to dictate and to implement a policy with certainty and continuity once it is adopted. *Authority* must go with *responsibility*, and here we would face problems that perplexed Plato and philosophers down to the present: *the reconciliation of liberty and authority*.

The report of the National Resources Planning Board offered to Congress by President Roosevelt on March 10, amid much fanfare, depicts a program designed to guarantee a private or public job for every able-bodied person. We might well ask, as we study it: "How can the Government make such guarantees unless it has supreme authority to command both labor and management?"

When the Government takes over, the area and scope of liberty tend to shrink. In Europe, the interventionist state consistently has driven roughshod over the freedom of the people—often in the name of the people. Huey Long once said that, when Fascism comes to America, it will be in the name of anti-Fascism!

That government enterprise and liberty may not be able to survive *together* is suggested by three recent experiences in the United States:

1. The national government passed the Hatch Act, restricting substantially the liberties of public employees. One may ask legitimately: "Suppose we were all government employees, would we all be deprived of our political liberties?"

2. When New York City in 1940 took over the operation of the subways, Mayor F. H. LaGuardia, with a long record of labor sympathy, announced that the right to strike and the closed shop would not be tolerated.

3. When W.P.A. workers went on a strike, President Roosevelt said firmly: "You cannot strike against the Government!"

These are straws in the wind. But there are enough of them to justify us in raising the question as to whether liberty and freedom can survive if we shoulder upon the Government the responsibility for our welfare, our jobs and our incomes. We *can* say that in Europe, where the State has reached deeply into the lives of the people, their liberties and rights and the protection of minorities have disappeared.

In the United States, the new thing that came into the regulation of business after 1929 was the attempt to deal with the central problem of capitalism: depression and unemployment. Previously, regulation had dealt with "incidental abuses," such as monopolies, fair trade practices, legal evasions, etc., and had presupposed always that private enterprise was sufficient to bring about relatively full employment

\*\*\*  
**FOR ALMOST two years  
after World War I we enjoyed  
business expansion and inflation  
but with no conscious  
over-all policy. Had we understood  
more thoroughly the nature  
of the post-war period we  
might have set in motion forces  
that would have maintained  
prosperity**  
\*\*\*

and adequate production, in spite of regrettable temporary lapses.

After the war, we must determine whether private business is to resume its historic role of providing employment and output, or whether Government will take over these responsibilities and we place in jeopardy the great human values for which this country was founded—freedom from governmental compulsion of body and mind.

Thus it should be clear that, entirely apart from any personal interest which the business man may have in preserving his business, the issues are much deeper—our American way of life.

When we entered the war in 1941, we had not solved the basic maladjustments which plagued us in the 1930's. Unless we take sound steps now, during the war, to set our house in order, these maladjustments may drive us to take desperate steps in the post-war period, once the initial boom subsides.



# SHIP RIGHT *FOR VICTORY*

These boxes bear War Goods.

Most boxes do — but no matter what's in them, the product required the use of material, money, labor and time — and America has none of these to spare.

In other times we used to speak of "replacing" goods that became lost or damaged. Now we know that term won't do — for you can't replace time, nor material, money nor labor, except by using more of it — and America has none of these to spare.

"Wartime conditions make it more necessary than ever for shippers, handlers and receivers of freight and express to strive for the goal of Perfect Shipping."  
JOSEPH B. EASTMAN  
Director  
Office of Defense Transportation

**PREVENT LOSS and DAMAGE**

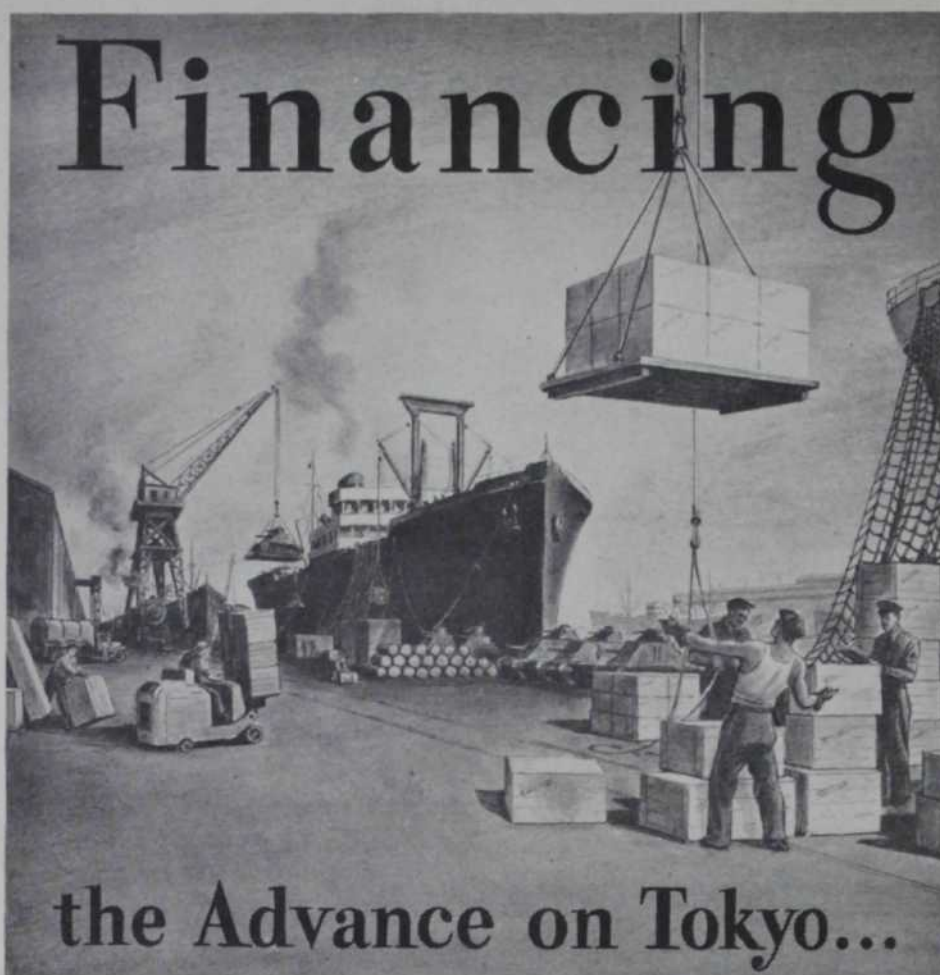
**Observe  
PERFECT SHIPPING MONTH  
—in April and EVERY MONTH**

*Association of*  
**AMERICAN**



**RAILROADS**  
*Washington D. C.*





## Working Capital Available For Productive Industries

Every step forward from Guadalcanal, or New Guinea, is a step toward the ultimate objective.

But the advance must be paced at home by the army that fights with the weapons of production.

This calls for financing on a scale far beyond the normal range of many concerns . . . perhaps beyond the limits of their regular sources of credit.

In many such cases, Commercial Credit has engineered plans to provide all, or any part of, the vitally needed working capital.

In every such case involving a government contract, we supply a substantial part of the money needed, without liability to you.

Whether it be a matter of thousands or of millions . . . whether to finance current production or to increase productions for military or essential civilian needs, we can quickly present a plan to fit your requirements. For fuller information either by correspondence or interview, write

## Commercial Credit Company Baltimore

Subsidiaries: New York Chicago San Francisco Los Angeles Portland, Ore.

CAPITAL AND SURPLUS MORE THAN \$65,000,000

Send for free color charts showing ARMY, NAVY and MARINE insignia and decorations.



## Verveless:

MORNING MAIL isn't what it used to be since war silenced the high-pressure letter writers

ONE REASON I yearn for the end of the war is that it will bring the old verve back to my morning mail, which has been falling off in quantity and quality. I miss the directness, the simplicity and frank approach of the opening gambit of the letter which begins, "I want to give you a \$5 Genuine Firebug Cigarette Lighter absolutely free." What cheek would not glow over the letter which informs you that you are one of a selected few of highly cultivated tastes, the only ones capable of appreciating the article which is about to be offered you? These flattering unctious are numberless.

The mail which the hallman pokes under my door each morning is sadly lacking in these things. I am still being "invited" to dinners and dinner-dances, where for only \$5 or \$10 per ticket, I may hear some awesomely prominent man speak, though I may find myself seated at Table No. 92 in an adjacent room and have to listen to him by wire; dear old Alma Mater still hopes to interest me in the Centennial Endowment Fund; and dear old Xi Gamma Pi, whose chapter house is mortgaged to the door-knobs wants me to believe that "This is *your* house as well as ours."

There are also the organizations for the relief or the uplift of something or somebody, whose persuasions are various; as for example, when they enclose something which you are expected either to return or pay for heavily—sometimes only stamps or labels, though the game is more interesting when they send, as one outfit did, a handkerchief. Another sent a toothbrush "with your both initials on it," another, some embroidered monograms for my shirts and underwear, a luxury hitherto unknown to me—the monograms, I mean, not the underwear—while one even sent a nice fountain pencil, if that's the right name for it.

Having long ago effected a satisfactory compromise with my conscience, I never return any of this stuff unless I have to. The people who sent the pencil finally grew rather shirty about it and I had to send that back.

By saving these letters which have been signed by Big Names—sometimes without knowing what it is all about—one may eventually accumulate a nice collection of the autographs of great people—though certain persons, trying



to beat down the value of my collection, have spread rumors that the Big Names do not actually inscribe these thousands of signatures themselves.

But the sort of mail I miss is that which comes from having your name on a mailing list.

Some mailing lists are taken from *Who's Who* and some from the telephone books, but the origin of certain others is still a mystery to me. I have heard of fellows getting good salaried jobs, just on the strength of possessing a mailing list. My first name has been written Albert, Alfred, Alba, Albin, Alden, Allen, Alwin and in some 20 other ways, while Harlow is subject to equally as many changes, including Horton, Harbin and the still more bolshevik-sounding *Harbov*. The most romantic version and the one which I am strongly tempted to adopt is Alain I. Harlowe.

### Dear popcorn vender

BY SOME secret, inscrutable alchemy of the mailing list, the popcorn industry began exerting pressure on me five years ago in the belief that I am a retail merchant of that commodity. It started with sample copies of a popcorn trade journal. After that came a stream of circular matter advertising poppers, cases, wagons and the corn itself. I have tried to guess what thoughtless act or word in the past now causes me to receive, as I do at intervals, chatty letters addressing me as "Dear Mr. Popcorn Vender."

I did not worry over this until I heard of a similarly innocent man in Pennsylvania whom mailing list rumor has put into the typewriter business, and who recently received one of those delicate "Hey, You!" letters from the Government demanding that he fill out report form No. KG4812-L38W regarding that business, or take the consequences.

Nor do I comprehend why I was once pressed to join the Cornell Club of New York. They had my name and address accurately; they remind me that "You want the finest club possible for Cornell in New York," though why I should be suspected of such fealty is a puzzle to me, inasmuch as I have never set foot upon the Cornell campus.

There are others, however, who do not suspect me of being a college man. They offer to sell me, on terms, a set of books which will lift me out of the slough of illiteracy. None need lack a profession if he will but heed the morning mail.

"Do you," begins one letter, "want to get a really good start in Songwriting?" (It's all one word now.) "Do you want to hear your Song Broadcast and see it Published?—and—on top of all this—receive a \$50.00 CASH AWARD?" Somewhere in the letter you discover that you must first send \$2.

One concern once sent me a confidential announcement of a book bargain which only a favored few were to be let in on. It was all terrifically solemn—in the manner of a printed office memorandum form, headed, "Confidential announcement to [typed] ALDA F. HARGOW From [typed] HENRY J. GLUNK." There was a file reference number, a stern order, "Not to be released before October 20," and a plea to

**HELPS**  
**FOR OFFICE MACHINE USERS**

These booklets, folders and tables are typical of the valuable wartime helps that Burroughs offers to users. They are designed to help users take full advantage of the time and labor saving features provided by their Burroughs machines—to aid them in getting the most out of their present equipment. For these and other wartime accounting helps, call the local Burroughs office.

**BURROUGHS ADDING MACHINE CO.**  
DETROIT, MICHIGAN

**Burroughs**  
**ADDING MACHINE**  
*Short Cuts*

**MATERIAL and PRODUCTION CONTROL**

**UNIT VALUE-5**  
RATION COUPON TABLE

**UNIT VALUE-4**  
RATION COUPON TABLE

**UNIT VALUE-3**  
RATION COUPON TABLE

**UNIT VALUE-1 1/2**  
RATION COUPON TABLE

**Short Cuts**

**1 Multiplication Over a Fixed Decimal Point**

The use of a fixed decimal point simplifies pricing of commodities involving fractions and provides accumulating amounts of sales, expenses, etc. When the decimal point is moved (changed) from one position to another, decimal point errors are avoided in the calculation.

A fixed decimal point can be established on any problem on the Burroughs Calculator by moving the decimal point from the right-hand side of the keyboard.

Example: Multiply 100 by 1.25 (1 1/4)

1. Set decimal point to the right of the 100.

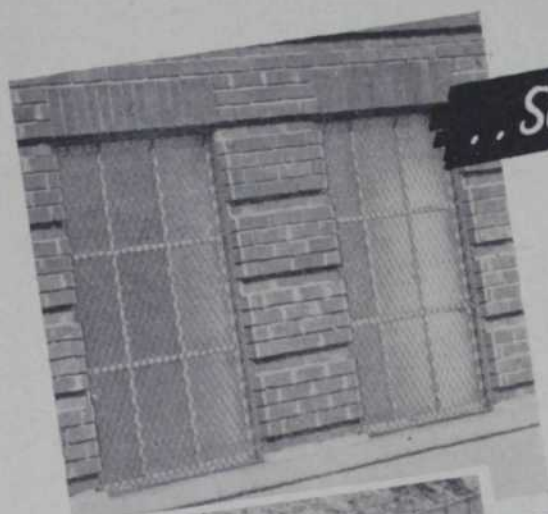
2. Multiply 100 by 1.25.

Fixed Decimal Point Illustration

When decimal point is moved to the right, the result is multiplied by 10, 100, 1,000, etc., according to the number of places moved.



# Don't give enemy agents a chance!



**... Screen all windows**

To guard the nation's war production from vicious acts of saboteurs, every effort must be made to keep them from gaining access to war plants. You can help, by plugging all "holes" in your plant where they might sneak in. Screen all windows, especially those facing sidewalks or parking lots, with a good, strong steel mesh. It prevents breaking into the plant—and it eliminates the possibility of having tools, plans or blueprints tossed outside to a confederate.



**... Fence all parking areas**

When parking areas are enclosed with fence, employees must pass through pedestrian entrances. Thus a complete checkup can be made of any packages carried to or from workers' cars. Not only the plant itself—but all vital areas, such as power controls or transformers, should be enclosed with high fence—preferably with a barbed wire top.



**... put Gates over spur tracks**

Don't leave a single place open or unguarded. Put gates over spur tracks—fence over storm sewers. Be sure there is no possible place of entry that can not be locked or guarded day and night.

If you need fence or wire mesh, call us. Demands are heavy, supplies limited. But if you have proper priorities we can take care of your needs. We'll help you choose the right materials and give you a free estimate. For further information clip the coupon below for our free book on fence.

**CYCLONE FENCE DIVISION**  
(AMERICAN STEEL & WIRE COMPANY)

Waukegan, Ill. • Branches in Principal Cities  
United States Steel Export Company, New York

## CYCLONE FENCE



**UNITED  
STATES  
STEEL**

Clip this coupon—and send it to:  
Cyclone Fence, Waukegan, Ill., DEPT. 543  
We'll send you our free, 32-page book on fence.  
It's full of facts, specifications, illustrations.  
Shows 14 types of fence. Before you choose any  
fence for your property, get the facts about Cyclone. Mail this  
coupon today.

Name.....  
Address.....  
City..... State.....  
Interested in fencing: ☐ Industrial; ☐ School; ☐ Playground;  
☐ Residence. Approximately.....feet.



me to "Please destroy this if not used." Running through it all, I could sense the publishers' haunting fear that some unauthorized person would get hold of one of these slips and buy a set of books.

One of the pleasantest features of the morning mail inspection used to be the receipt of grateful letters expressing appreciation of my patronage from business houses whose doors, to the best of my knowledge, I have never darkened. A clothing dealer whose name was strange to me might lead off with thanks for past favors and notify me of an unprecedented mark-down sale, the first day to be strictly private, just for old customers.

I have never seen a winter when the diamond merchants were so trustful and remembered past favors so vividly—much more vividly than I did—as that preceding Pearl Harbor. I have bought only one diamond in my lifetime—my wife is wearing it yet—and that wasn't bought in New York. Yet certain metropolitan diamond merchants used to insist that I am an old patron and therefore entitled to special privileges. One letter began, "Dear Customer—We certainly wish to personally thank you again and assure you of our appreciation for your patronage." To make my Christmas shopping easier, this concern therefore elected me a member of its Xmas Klub, which meant that I had practically unlimited credit.

### Credit rating gratis

ANOTHER company admitted that "You are one of a selected group whose credit standing is of the very highest. That's why we would like to get better acquainted with you." I didn't know I had any credit rating in New York. Nevertheless, these boys, so the letter said, had already opened a charge account for me on their books, and enclosed an important looking card which certified that I was entitled to credit privileges and special shopping preferences at any of their seven or eight stores. They also enclosed a coupon which I had only to present at any of the stores, and walk away with a \$1.50 silver-plated spoon absolutely free.

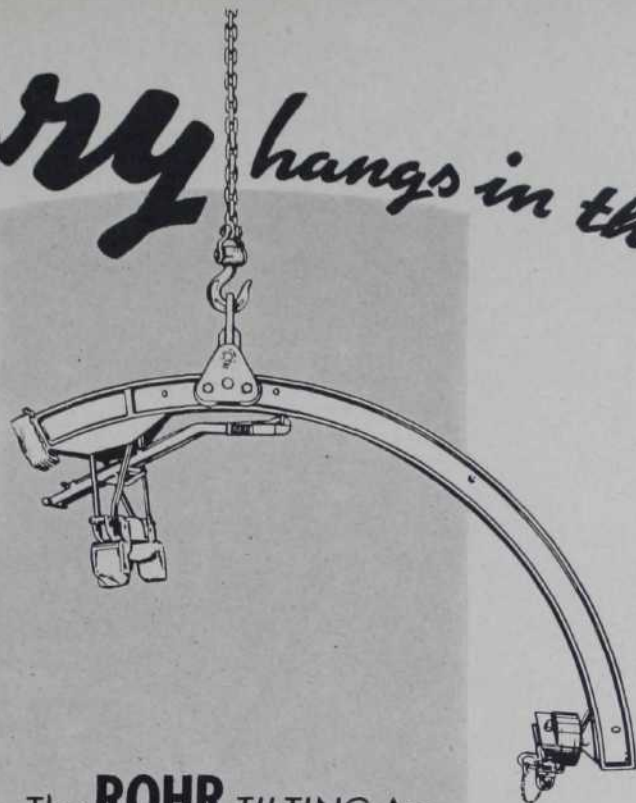
I could detect a bit of creaking of the machinery at times. For example, I once bought a certain widget, didn't like it, returned it and got my money back. The company knew that I bought the article but, until the war began, the news that I had returned it seemed never to have caught up with them. It appeared that I was enrolled as a member of a sort of club of satisfied users, and I was constantly being importuned to let my friends in on the new happiness by sending their names in to the office; to let the office know how greatly I was enjoying the widget, or to turn in my old one and get the new model which, as I gathered between the lines, made my current one look like something hammered out of scrap iron by a horseshoer.

Such is one of the many curses of war—the curtailing of these harmless little amenities which so brighten life in peace-time America. May the absent ones soon return!

—ALVIN F. HARLOW



# Victory hangs in the balance.



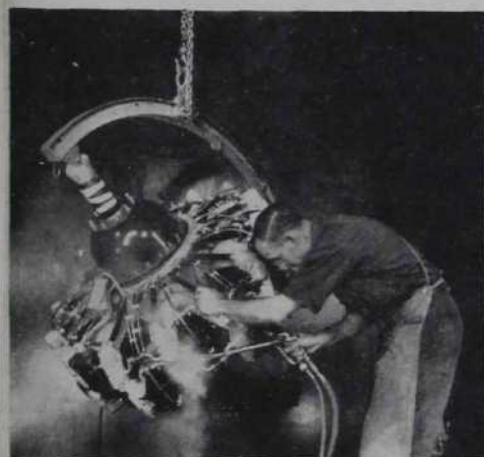
## ROHR

PARTS ☆ ASSEMBLIES

The **ROHR** TILTING Arc is typical of American ingenuity which is swinging the production balance further in favor of the Allies. It is just one of the many specially conceived devices and methods by which Rohr Production Fighters speed their thousands of tasks to ready Rohr equipped planes for the war front.

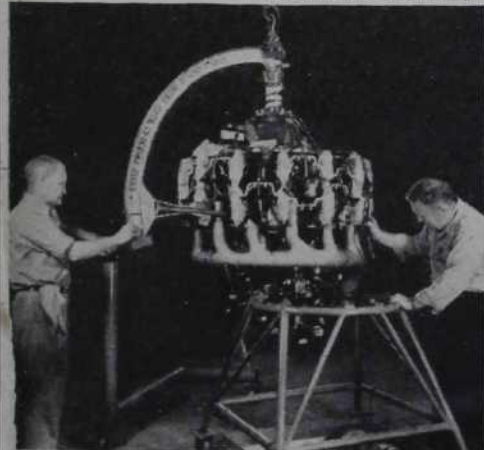
The Rohr Tilting Arc enables fewer men to turn out more work in less time and with less fatigue. It suspends heavy aviation motors in so delicate a balance that the pressure of a workman's hand moves them to any position within a 90° arc. Its application to fields of final assembly and advanced base repair increases its win-the-war service immeasurably.

HELPING TO WRITE  
THE STORY OF TOMORROW



CLEANING A MOTOR

MOTOR ASSEMBLY



ROHR AIRCRAFT CORPORATION



MATING A WING



FIELD SERVICE

CHULA VISTA, CALIFORNIA





A convoy of gun carriers prepares to leave the factory for the Army supply depot

# Stop Kidding Women Drivers

By SYLVAN LEBOW

**AS MALE** drivers join the Army, the girls are demonstrating that they can handle ten-ton trucks equally as well as baby buggies

**T**HE WELLESLEY girl's a grease-monkey for a ten-ton truck. Mothers are driving buses; their daughters are ferrying jeeps and gun-carriers from Midwest factories to Army depots. In cities from Maine to California women are driving bakery, milk and department store trucks. Some are even piloting the big over-the-road trucks in inter-city hauls of war materials.

That gives you a fair cross section of the new army of women truck drivers. These are victory jobs, and the girls are delivering the goods. Women have been driving trucks in England for some time. We're going to see a lot more of them in the



It costs about \$300 to train a driver. Tests show they equal men in original aptitude

driver's cab over here before this war is over. What's more, they like it.

Now, your Uncle Sam is the biggest motor truck operator in the world. The number of trucks he owns is a military secret but, for the past year, with few exceptions all automotive production has been limited to military vehicles. To keep your mechanized Army rolling, at least a third of the soldiers must be drivers or service men for some type of blitz buggy.

That's why the manpower shortage in the trucking business is so serious today. The industry already has lost 29 per cent of its employees to the military forces. America's commercial motor vehicles must be kept rolling to supply oil for the tanks, food and equipment for the soldiers and keep the production lines going.

So, the women are being called in.

Although many fleets have experimented with women drivers





*Another Story of* **W.E.S.** *at Work*

# flying saw delivers red hot pipe on the run

Steel pipe, vital at a thousand-and-one points in our total war effort, races out of the mill at speeds up to 500 feet per minute. That's bad news for the Axis, *but . . .*

Such a production rate would be meaningless if the pipe couldn't be cut into usable lengths at the same rate of speed. To complicate the problem further, pipe size varies from  $\frac{3}{8}$ -inch to four inches in diameter, and speed of the pipe through the furnace is changed frequently to maintain correct temperature.

Westinghouse engineers went to work with steel industry engineers, and came up with the solution—a "Flying Saw."

In effect, the saw carriage runs back and forth along the moving pipe. For a brief instant it is moving in the same direction as the pipe and at the same speed. In this instant

the carriage tilts forward and the high-speed rotary saw slices through the metal. This complex job of timing and co-ordination is handled automatically, by Westinghouse Synchro-tie and associated electrical controls. Red hot pipe is being sawed into accurately measured lengths, as fast as the mill can turn it out.

Such problems can be solved only by close co-operation between customer engineers and electrical engineers with specialized knowledge of their industry. In the nationwide corps of Westinghouse engineers are men especially qualified to work with *your* engineers, on *your* problems. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. J-94518

## Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

### **W**ESTINGHOUSE **E**NGINEERING **S**ERVICE

A nationwide corps of engineers offers you electrical and production experience gained through years of working with your industry.

In addition to engineering help on specific industry problems involving electrical power, these men can give you assistance on these other vitally important activities:

**Product development:** engineering of equipment to meet war requirements.

**Maintenance:** help in making existing equipment serve better, last longer.

**Rehabilitation:** redesigning and rebuilding obsolete equipment for useful service.

**Material substitution:** adapting available replacements for critical materials.

W. E. S. is available to *all* industries. Put it to use today on your production problems.





from time to time, systematic use of women in trucking operations was launched about the same time early this year by a few commercial fleets and the Army.

### They get dirty

HOPPING around the country to see some of the women drivers in action, let's first visit an Army camp.

At Lowry Field, Denver, Barbara Mills, 19, and 108 other girls have replaced men as truck, staff car and jeep drivers. These young women were hired through federal Civil Service at \$110 a month, under a War Department policy of putting women and civilians in all Army post jobs not directly concerned with "hitting the enemy whenever and wherever we can reach him." The girls used to be fashion experts, cooks, stenographers, Red Cross instructors, hairdressers and seamstresses. Now they serve as chauffeurs for officers, drive troop convoys to trains and haul supplies and equipment.

"I feel that I'm doing something worth while on this job," says Barbara.

Her father, Col. Harry A. Mills, was taken prisoner on Bataan.

Then there's Elizabeth Roche, of Laurum, Mich. She was educated at Wellesley and the University of Michi-

gan; holds two college degrees. Now she's "Lieutenant" Roche, of the W.A.A.C.'s. Graduated from the officers training course at Fort Des Moines, Iowa, she was sent to Camp Holabird, Md., with seven other Fort Des Moines third officers, all college girls, for "post-graduate" work in motor operation and maintenance, transport supply, movements, management and convoying. Finishing their six-week training at Holabird, they return to Fort Des Moines as instructors.

The W.A.A.C.'s driving experience is limited to the lighter types of trucks, but they are learning all about the big babies, too, even down to changing the jumbo tires. The Holabird course includes the complete teardown and rebuilding of a motor.

Don't get the impression that you have to be a college graduate to get a trucking job. However, intelligence, rather than toughness, is sought. Most of the girls start from scratch, work hard and learn to handle the new jobs quickly.

Business experience is helpful, too, in many types of operation. Tall, attractive Vivian Krickbaum, of Harrisburg, Pa., is 28 and single, lives with her mother and sister. She used to run a refreshment stand at a military depot for \$28 a week. Three months ago, she got a job driving a bakery truck. Now her sales commissions bring her aver-

age weekly earnings to \$46. Her employer, J. M. Dolson, sales manager of the Manbeck Baking Company, says she is doing fine.

Dolson reports it takes \$300 to train a girl for this type of work. Not only must she learn to drive the truck and make minor repairs; she also must learn the company's line and the route to which she is assigned. This company has added two women drivers to its staff of 40, and expects to take on more as men drivers are drafted. Accordingly, the baking plant's locker rooms and other facilities are being changed for the comfort of the women drivers.

Vivian wears a specially designed uniform of tan gabardine slacks and jacket, with cap to match. A department store in the city where she lives has provided its women drivers with resplendent green and red wool uniforms. Some of the companies in the larger cities try to outdo each other in the splendor of their teamsterette togs, but most of the girl drivers wear slacks or jodhpurs, sweaters, windbreakers and bandanas.

Four women, two of them weighing scarcely 100 pounds each, drive big ten-wheeled Army trucks 680 miles from Detroit to Ayer, Mass., as their contribution to the war effort. They are among 50 whom the Canfield Drive-away Company, a Detroit firm which convoys new military vehicles to Army depots, hired recently.

### "This job's a cinch"

MRS. Elsie Bryan, of Traverse City, Mich., expresses the sentiment of the teamsterettes this way:

"The bigger they are, the easier they are to drive. This job is a cinch."

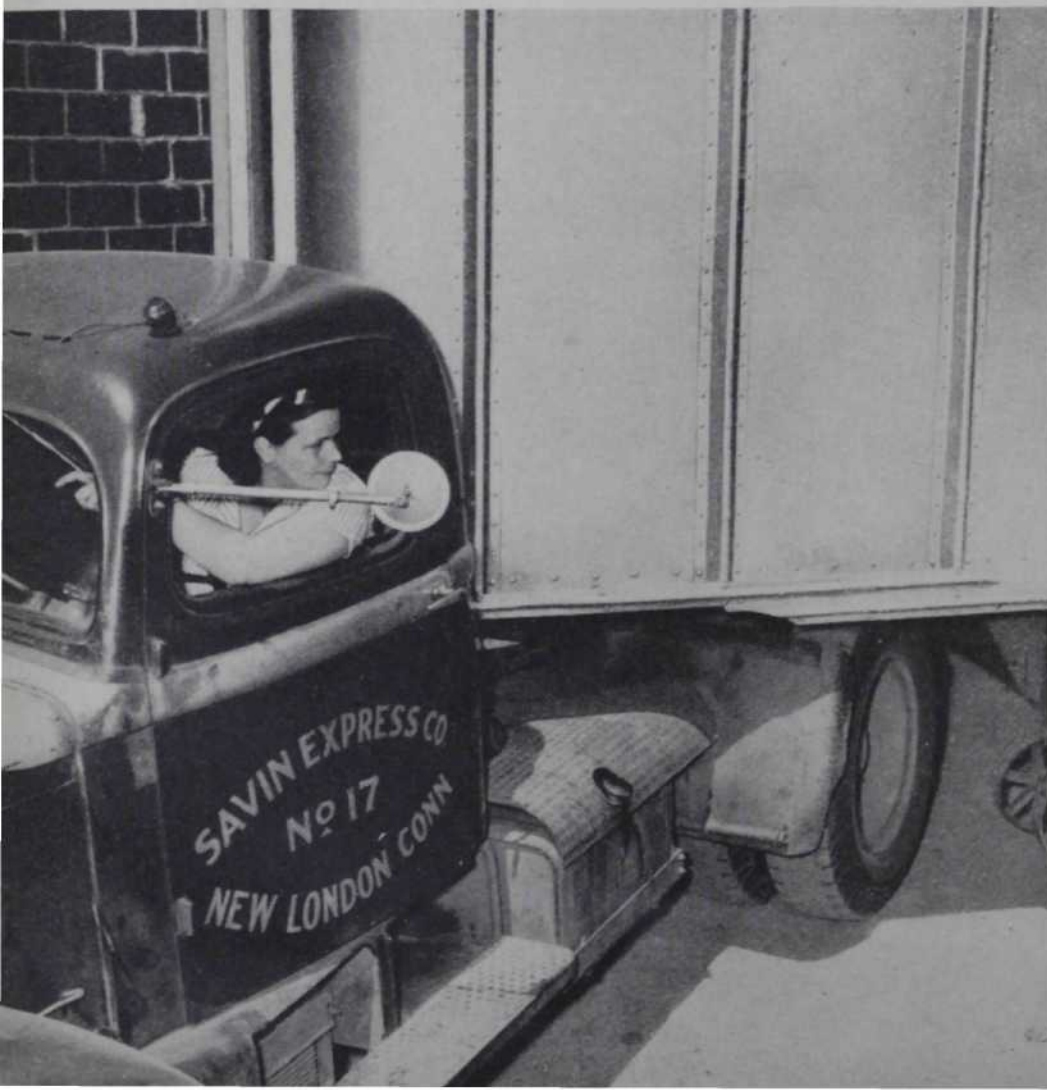
Two of the women have 18-year-old sons doing the same work.

The bus companies were among the first to experiment with women drivers. James J. Duncan, president of Duquesne Motor Coach Lines, Duquesne, Pa., has been one of the pioneers in this field.

"When we faced loss of men drivers to the draft," he says, "I advertised for women drivers. From ten applications I selected three. Their ages ranged between 30 and 35 years. Each had between ten and 15 years' experience driving automobiles, though none of it was with heavy equipment.

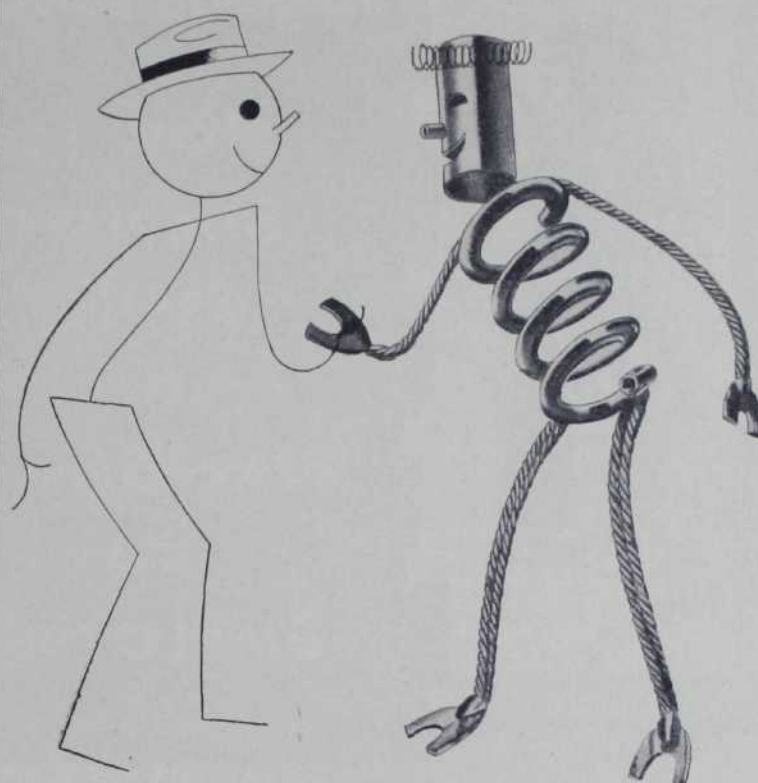
"Each had three days of driving instruction by our regular drivers starting out in an open field. Then the in-

"The bigger they are, the easier to drive" is the way one woman describes the semi-trailer jobs





**WE HAVE  
THIS TO SAY  
ABOUT  
COPPER**



The copper industry has been doing an outstanding job in this war. Don't forget it when you are passing out the *kudos*. Where would the war be without copper, lots of it?

Copper is really something. It is the best stuff in the world for many, many things. The endowments nature gave it can never be gainsaid. Everybody knows copper.

But do they? Are the thousands of Imagineers throughout industry giving this familiar metal the attention it deserves? There *must* be new ways to use copper.

It must be obvious that we, whose minds are full of ideas about future uses of Alcoa Aluminum, make this suggestion about copper for the best American reason there is. Every new use to which copper can be put after the war makes for employment. For all we know, some new application you may devise for copper will call also for some aluminum, working side by side.

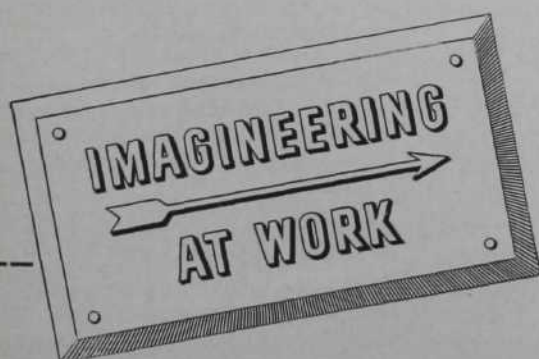
What we are trying to get at is this: If you will tackle industry's basic responsibility of providing postwar jobs by doing some serious Imagineering, we are willing to let the *specs* fall where they may.

When you do start to engineer your Imagineering down to earth we can honestly promise you some rather amazing potentialities in Alcoa Aluminum.

We have poured everything we know into the speedy sevenfold expansion of the aluminum industry for war. We have given freely of that knowledge to others. Tremendous volume is only the beginning of the aluminum story. At Alcoa, production efficiency has been lifted to new levels all along the line.

The war is getting the whole benefit now. When that has been won, it will be the Imagineers' turn.

ALUMINUM COMPANY OF AMERICA, 2125 Gulf Building, Pittsburgh, Pennsylvania.



# Alcoa Aluminum







## How to SIMPLIFY ISSUE OF WAR BONDS TO EMPLOYEES

**W**AR BOND paper work has been standardized by the Treasury Department and need not create a new problem if properly organized.

Basic requirements are speed of issue, legibility and accuracy . . . essentials to *all* financial documents.

Just as thousands of other employers are doing this work with the help of their Addressographs, you can undoubtedly adapt your present equipment to War Bond issuing in addition to the work it already is doing.

With Addressograph, all prescribed information about owner, co-owner and beneficiary is established *once* and audited *once*. From then on, the procedure flows mechanically. Every Bond issued is accurately inscribed, permanently legible and gets to the employee faster. For details write for our free booklet.



*This is only one of many extra jobs your Addressograph equipment can do for you. Consider its further application in connection with Controlled Materials Plan, Withholding Taxes, Absenteeism, Government Contract Requirements and similar problems. A trained Addressograph representative will be glad to explain how. Call or write nearest agency, or write*

**ADDRESSOGRAPH DIVISION  
ADDRESSOGRAPH-MULTIGRAPH CORPORATION  
CLEVELAND, OHIO**

Addressograph is a trade-mark registered in the United States Patent Office.

structors took them out on our regular routes.

"I was with one of them one day when she got into a pretty tight spot near a Pittsburgh Railways street car. I offered to get her out of it, but she said, 'Stay where you are; I'll handle this.' She got through like a veteran.

"These women are paid the same rate as our men drivers. I feel they are doing fine and, as the manpower situation gets more acute, I will not hesitate to hire more of them. To date, none of them has even scratched a bus."

M. A. Savin, a New London, Conn., fleet owner and regional vice president of the American Trucking Associations, was one of the first to set up a training class for women drivers. He starts off with tests to determine driving ability. Good reflexes and ability to judge distances are the prime natural requisites. In this respect, at least, the tests prove that the women are equal to the men. The initial tests also weed out those girls who apply for the job just for a lark. It takes a lot of money to train a driver properly, and the fleet owners are not wasting their time.

### How good are they?

FIRST driving practice is given on smaller two-axle trucks. Later, the women are taught how to handle the big tractor semi-trailer combinations.

Generally speaking, women cannot perform all tasks in the trucking industry. They are not being asked to handle heavy freight. Some operators feel that women are not physically adapted to handle the big tractor-trailer units on over-the-road runs. Others contend that, with proper training, women can handle some of this equipment. The consensus is that women should replace men first on the lighter trucks, advancing to handling the heavier, semi-trailer jobs later, and as needed.

Women in Savin's class get a brief training in minor repairs, so they will be able to tell readily where the difficulty lies when the truck is not operating properly.

All applicants must familiarize themselves with the safety regulations of the Interstate Commerce Commission, which govern all interstate trucking operations, and must have a thorough knowledge of their state motor vehicle laws, as well. For the most part, the same regulations apply to women as to men. Any driver in interstate operation must be at least 21 years old, and must submit to a physical examination. In some states it may be necessary to amend employment laws to allow women to drive at night.

The New London course and others like it are turning out capable replacements to take the places of experienced truck drivers called into the armed forces.

The Government also is providing facilities for training women in the art of truck driving and maintenance. The Women's Army Auxiliary Corps, the War Manpower Commission and the National Youth Administration are among the agencies which have set up training programs. Trucking associa-



## Note the **CARBINE...**

**"...increases fire power 33%!"**

"After 35 years, the Army goes from the pistol to the carbine . . . The Winchester carbine is rated high, and is judged to increase the fire power of the infantry regiment by 33 per cent."

*As reported by a prominent news magazine*

"All the men and officers in the infantry who have been armed with the pistol will carry the carbine instead . . . We believe it to be a weapon of great merit . . ."

ROBERT P. PATTERSON, *Under Secretary of War*

The same manufacturing ability that has made Underwood Elliott Fisher typewriters, adding and accounting machines famous throughout the world, is now being applied to the production of carbines.

**TO OUR MILLIONS OF VALUED CUSTOMERS: TYPEWRITERS**—New and used typewriters are sold only to the U. S. Government for the armed services. You may rent used machines under Office of Price Administration regulations.

**ADDING AND ACCOUNTING MACHINES**—New Machines are available under War Production Board regulations. We have been able to assist many of our customers with their accounting problems.

**RIBBONS, CARBON PAPER, ETC.**—We may sell ribbons, carbon paper and other supplies for all types of office machines without restriction.

**MAINTENANCE**—Our maintenance service is in complete and efficient operation from coast to coast to help you keep your Underwood, Elliott Fisher and Sundstrand machines operating efficiently and we are permitted to manufacture the necessary parts.

Carbines are now  
in mass production by

## Underwood Elliott Fisher Company

Former and future makers of Typewriters, Adding and Accounting Machines

★Enlist Your Dollars  
Buy More War Bonds  
To Shorten The Duration



# LISTEN TO THE SONG OF A NATION'S FURY!

This is the song of America with the big shoulders. America with hands and brains and power. With wheels turning, dynamos driving, pistons pounding. With great rivers pent-up in its dams, and a billion engines hauling freight . . . digging coal . . . splitting timber . . . pouring steel . . .

This is America today. This is America with the throttle wide open, all-out for Victory.

Behind the staggering spectacle of war production is the basic force that sustains the whole enterprise—and makes it possible . . . **OIL POWER!**

With factories operating on 24-hour schedules . . . with less time for overhauls . . . and with replacements scarce . . . the hazard of machine breakdown is increased a hundredfold. It is of vital importance, therefore, to protect mechanical equipment—and to insure a steady smooth production with *Precision-Perfect, Service-Proved* lubricants.

Whether your job calls for one or many types of lubricants, Cities Service is ready to serve you with top-quality products and expert counsel.

Get in touch with your nearest Cities Service office—today!

In war as in peace, Cities Service remains dedicated to the same ideal . . . *Service to the Nation!*

**OIL IS AMMUNITION—USE IT WISELY!**



tions in some states have formed classes of instruction for various types of trucking jobs.

Truck manufacturers are helping by providing instructors.

Otto S. Beyer, director of the Division of Transport Personnel, Office of Defense Transportation, says that at least 300,000 women will be needed to help the transportation industry keep America "on the move" before the war is over. Of these, 120,000 are already employed by airlines, railroads and trucking concerns.

Realizing the importance of highway transport, the War Manpower Commission has declared trucking an essential industry. Selective Service Headquarters also has issued a directive to local draft boards permitting them to defer certain key trucking employees from the draft until replacements can be trained.

A survey by the Office of Defense Transportation and the American Trucking Associations recently showed that the most serious shortages in the highway transportation industry are for drivers of heavy trucks, mechanics and rate clerks. Each of these jobs requires considerable training. Some employers say that inability to get new equipment has created a need for even more mechanics than usual although the industry and the Government have invoked stern conservation measures to make every truck mile count in the war effort. The survey showed that 75 per cent of all the tonnage the motor carriers handle today is directly related to the war effort.

## Waiting for Johnny

POINTING to the need for replacement training programs, Beyer told the truck operators at their recent annual convention in St. Louis to "revolutionize your thinking as far as women employees are concerned."

He says there is much room for increased use of women employees in delivery and maintenance, as well as clerical work.

The highway transportation industry is young and flexible. It holds forth opportunities for bright young women with proper training. Highway engineers predict that, after the war, this nation's network of roads will be expanded beyond the scope of present-day imagination. Today many women already are old-timers in the business. There is hardly a job in the industry that isn't held by a woman somewhere. Some women are holding down high salaried positions as personnel executives and terminal managers. Four women manage state trucking associations. A number of women own and operate their own fleets.

Most of the girls, however, are just helping to keep 'em rolling until Johnny Doughboy comes marching home. Then they'll be wearing dresses again, instead of slacks.

Then they'll be rolling baby buggies, instead of blitz buggies.

Meanwhile, don't bawl out the women drivers any more, buddy. They're doing a great job!



## "Key" Men...



HOUDINI had little, but speed, on the nation's 2,000 locksmiths, whom Diogenes would love to meet

THE AVERAGE policeman in any fair-sized city today could direct a modern Diogenes to an honest man.

The paragon of personal integrity is the locksmith!

The reason is not difficult to understand. The locksmith can open any lock, safe, or vault within a working radius of his shop. Usually not even under bond, he carries in his head the combinations of safes containing enough cash for personal independence while in his back pocket are the tools which give him access to any building in town. The locksmith has the "keys to the city" in a truer sense than any visiting celebrity.

Although more than 50,000 establishments in the United States can duplicate a lost key, there are only 2,000 *bona fide* locksmiths who can master the secret of any combination and any lock ever developed. They are a proud, but little-noticed, band of men carrying on a tradition of service.

For at least 3,000 years, inventors and engineers have been trying to develop pick-proof locks. But, throughout that period, keys have been lost and locksmiths have been called in to solve the riddles inventors produced. So far, the locksmiths have come through every time.

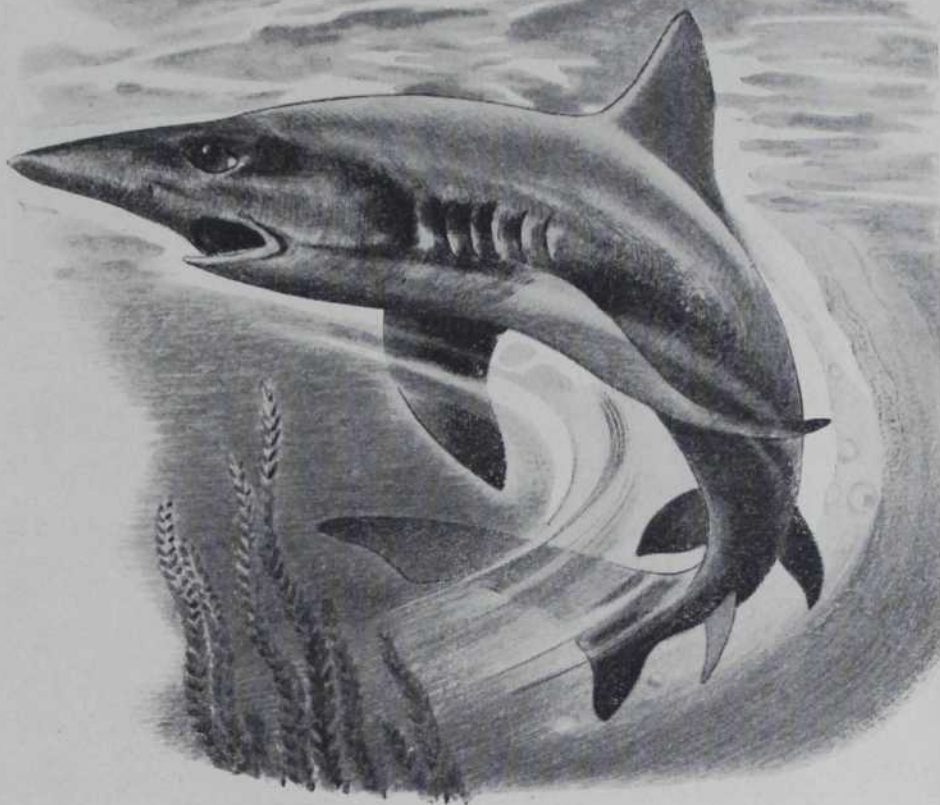
"The only locks a full-fledged locksmith can't open are those in fiction," they boast.

Locksmithing is one of the most fascinating professions in the world, according to its practitioners, who say that a good locksmith must have rare mechanical skill, a love of puzzles and all the requisites of a good businessman—plus indubitable integrity. He must be courageous, have sure hands and a pure heart.

Otherwise? He either goes broke, or to jail.

There are no trade schools for locksmithing; not even a correspondence course. The art usually is handed down from father to son. In the past few decades, however, the great demands of banks, hotels, office equipment establishments and other heavy safe or lock users has made it mandatory for "new blood" to enter the profession occasionally. Criminals were among the first to see the possibilities.

Occasionally one succeeded in becoming an apprentice but, by and large, the same perspicacity that helps a locksmith



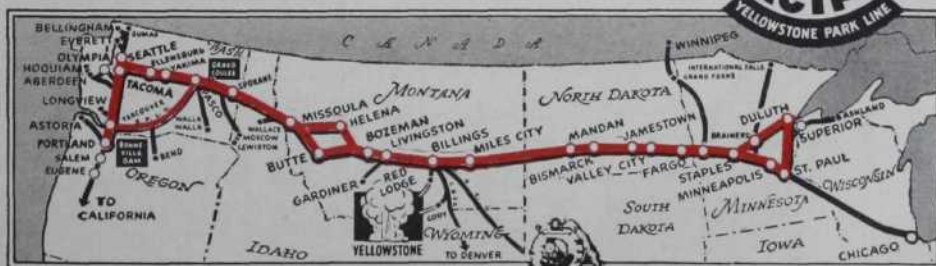
## This fish helps flyers see in the dark

EARLY in the war RAF night fighters proved that Vitamin A sharpens the night vision of flyers deficient in this vitamin.

Up to this time, imported cod and halibut oils had supplied most of this country's Vitamin A, but soon after we discovered *shark livers* a far richer source. Result: Shark livers jumped from 35c a pound to \$9.20 and the fish oil industry on the Pacific Coast boomed.

Today, billions of units of Vitamin A are going to British and U. S. flyers—thanks in part to the Northern Pacific Railway. Each month this railway delivers to Eastern pharmaceutical houses vital shipments of 50-gallon drums of shark liver oil, each drum valued up to \$5,000.

Doing jobs like this—jobs that bring Victory daily nearer—has earned this railway the nationwide reputation—"Main Street of the Northwest"!



"MAIN STREET OF THE NORTHWEST"





## Back from the hospital ... and *alone*

HER husband will live, the doctors say—but they can't promise that he won't be disabled permanently. Another serious industrial accident that might never have happened—if the *policy back of the policy* had been in force!

What is this *policy back of the policy*? It's Hardware Mutuals way of doing business. In Workmen's Compensation Insurance, it's the service that starts with a definite program of eliminating or preventing industrial hazards through special safety engineering, employe education and plant safety organizations. And should an accident occur, it means prompt, sympathetic claim settlement direct to the injured employe.

The *policy back of the policy* has attracted thousands to Hardware Mutuals. Whether it's Workmen's Compensation

or such other types of insurance as Automobile, Fire and allied lines, Burglary, Plate Glass, General Liability, etc., you deal directly through full-time and experienced representatives. Careful selection of risks has returned substantial dividend savings to policyholders—more than \$82,000,000.00 to date. Current dividend saving on Workmen's Compensation is 20%. All policies are non-assessable.

When your present Workmen's Compensation Insurance expires, find out how Hardware Mutuals can give you improved service and possibly reduce your insurance costs. Offices from coast to coast.

FEDERATED HARDWARE MUTUALS  
Hardware Dealers Mutual Fire Insurance Company, Home Office, Stevens Point, Wisconsin  
Mutual Implement and Hardware Insurance Company, Home Office, Owatonna, Minnesota  
HARDWARE MUTUAL CASUALTY COMPANY  
Home Office, Stevens Point, Wisconsin

For Workmen's Compensation . . . see

# Hardware Mutuals



Stevens Point, Wis. ★ Owatonna, Minn.  
Compensation, Automobile and other lines of

CASUALTY AND FIRE INSURANCE

to open a safe guides him in judging character. Few locksmiths' assistants have been arrested.

Little known to the average citizen, the profession of locksmithing is as confidential as a diplomat's briefcase, although their shops are open to all. S. A. McLean, of Denver, president of the National Locksmiths Association, is willing to tell anyone about locksmithing, but he refuses to let laymen read the association's bulletin, or other material printed for use of his members.

"It's devoted exclusively to tricks of the trade and allied subjects which are far too secretive to be made public."

The war has been favorable and unfavorable to locksmiths. Their supply of key blanks—brass with five to 12 per cent silver—continues to dwindle and they have little hope of replacements. This scarcity of key blanks oddly works somewhat in their favor since more and more "duplicating places" (just key shops and not locksmiths) are closing. The locksmith is swamped with repair work, re-fitting keys and in renovating old locks.

## Danger and comedy

LOCKSMITHS don't mind sacrificing needed metals to the war effort, but they are outspoken against wastes related to their work.

"I personally have seen the Army destroy hundreds of good padlocks, which cost the Government about \$6 each, simply because the keys were lost, although any good locksmith could have made new keys," one expert locksmith writes. Another says:

"If the American people knew the amount of money wasted each year in destroyed locks they would demand more use of locksmiths.

"What seems funny to me is: Why do people smash a lock instead of smashing or cutting the staples or hasps on which it hangs, when they have lost a key? The staples, or hasps, cost only a few pennies but few persons ever think of this."

Locksmithing has its dangers. For example, consider the spine-tingling job of opening a safe that has been "souped" (dosed with nitroglycerine) by safe-crackers who were scared off before they could finish the job. Yet, to locksmiths this is a matter of routine and, when they get together, they talk of humorous jobs rather than exciting ones. Always good for a laugh is the old story of the autoist, who, losing the key to his locked car, breaks the side window and then discovers that he still can't drive the car without the key.

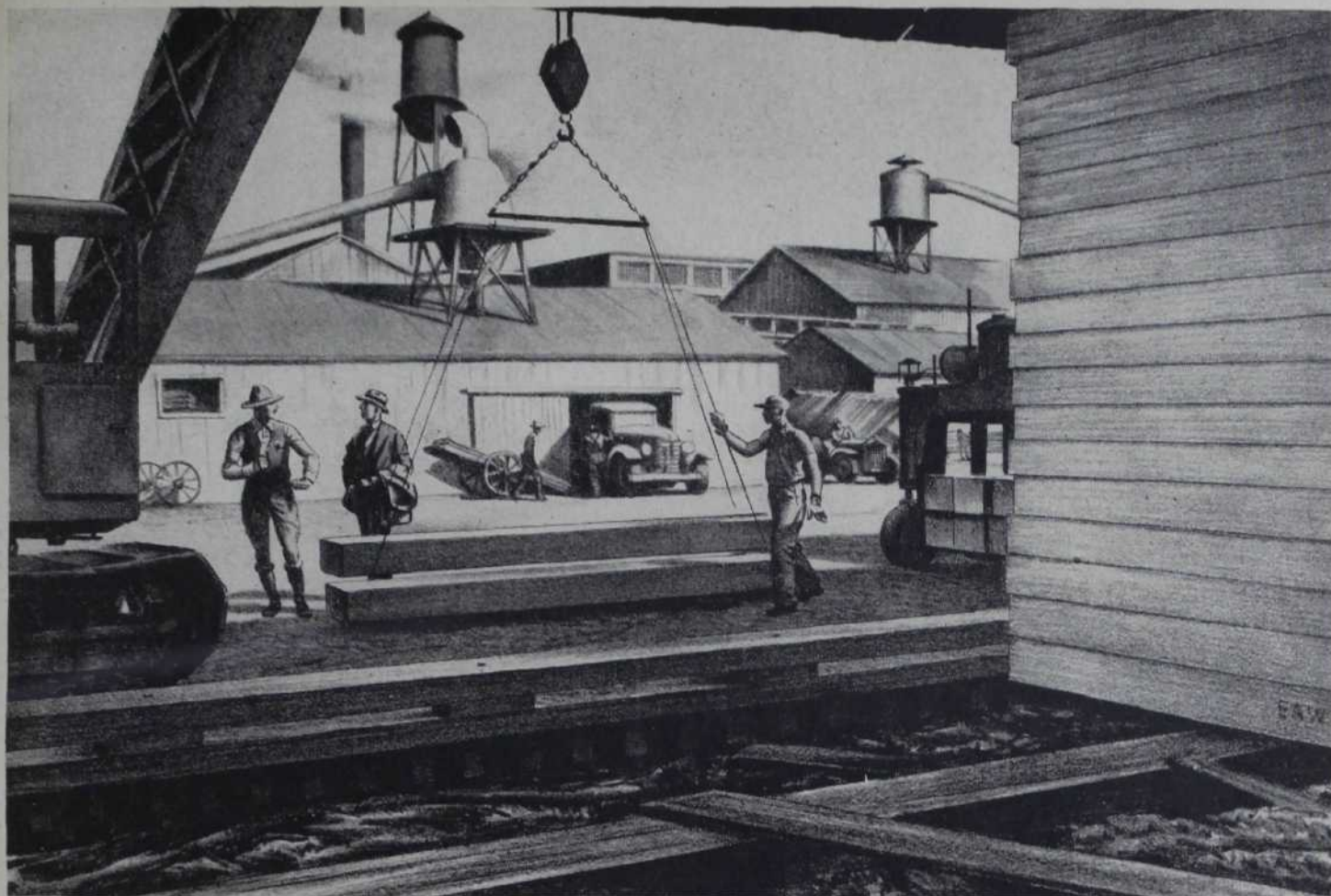
"If he had called a locksmith, his troubles would have been over in 15 minutes and the cost would have been far less than that of replacing the glass."

Harry (The Great) Houdini undoubtedly was the most famous locksmith in many generations, and locksmiths all admire him, but it pains them to read that he is the only man who could open, or work, any lock in the world.

"Any good locksmith can open any lock if given enough time," they maintain. "Houdini was no different from any of us in that respect.

"He was just faster."





## "You can Bend that White Oak—*with your Hands*"

Heart of white oak, which once had to be treated for a year before it was fit for the "ribs" of PT boats and other vital naval craft, now goes to sea in a fraction of the former time. There's a reason.

A Mid-west lumber company had a secret process, by which lumber is treated in great vats to make it *several hundred times more pliable* than normally. Giant kilns then reduce a year's drying time to two weeks. But—to produce this treated lumber on a wartime scale—the company

needed a large part of the country's available supply of heart of white oak.

In conjunction with the company's local bank, the Chase promptly helped to finance the purchase of needed materials—with the result that the operations of the company have been speeded—more PT boats are in action and just that much more pressure is brought against the Axis sooner. In ways such as this, banking, on many fronts, is helping to speed victory.

THE CHASE NATIONAL BANK  
OF THE CITY OF NEW YORK



## Simple and Sure

The greater the percentage of life insurance in a man's estate, the simpler the problem for his heirs.

Add to your estate  
through one of our  
low-premium policies.



**The Prudential**  
Insurance Company of America  
Home Office, NEWARK, N. J.

## Our Post-War Partners

(Continued from page 22)

where there is no political or other reason for doing so. Contrast this with the policy of the British, who distribute our lend-lease supplies to their people through the regular wholesale and retail channels, thus preserving the machinery of distribution.

I propose to do everything I can to back up our business men down there, and have assured them that our business men up here are solidly behind them.

It would be blinking the facts, of course, not to recognize that some feeling exists in South America that our interest in its welfare arises chiefly from war's pressures and our own immediate needs; that our desire for collaboration may cool with peace. Axis agents are working hard to foster that point of view. Fortunately, I am able to report that it is being dissipated slowly but surely. The best way to wipe it out entirely is through the cooperation of the business men of both continents, working with their governments in a spirit of reciprocity.

### Business is ready

THE MACHINERY for this cooperation has been set up. I found it working in a most heartening way in the South American countries I visited. The United States Commission of Inter-American Development, of which I have the honor of being chairman, is one of 21 such commissions representing all of the American republics. These commissions are made up of leading business men from all the countries. Their objective is the expansion of inter-American trade, and encouragement of more complete utilization of markets, manpower and raw materials of all the republics through carefully planned development and industrialization.

The commissions have established headquarters in the various capitals and are actively at work, consulting with each other, outlining post-war problems and proposing solutions, exchanging information, and lending active assistance to government agencies and private business enterprises. Some of them are already equipped with extensive libraries and research staffs.

This is a typically democratic approach by men who believe in representative democracy and are determined that it shall work.

South American business men look upon democracy and capitalism as synonymous. They see clearly that the only alternative is totalitarianism—the very thing we are fighting a global war against.

I wish every business man in the United States could talk with them on their own home grounds, as I did. Their confidence in the future is immensely cheering; their enthusiasm is contagious.

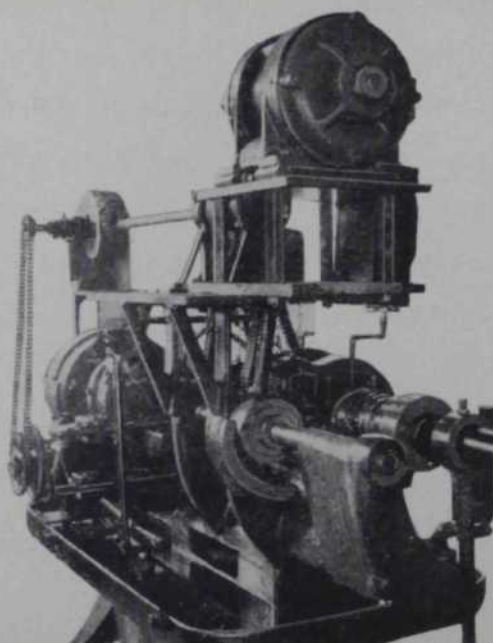
And we'll all learn more about them as fine partners when peace comes.

## Modernized by MORSE CHAIN DRIVE PRODUCTION UP 25%

"Production was boosted 25% when we replaced short-lived other type drives with Morse Chains. Before . . . down time, wasted power, frequent drive replacement and lost production let us down and upped costs of produced parts." So a manufacturer of machine parts told us!

Where drives get oily, Morse Chains are especially efficient, because unlike other type drives they are not affected by oil. Your nearby Morse engineer will gladly help you with drive problems.

*Teeth, Not Tension, enable Morse Drives to save substantially, to entirely eliminate slippage . . . to deliver every R.P.M. to the job!*



SILENT CHAINS

ROLLER CHAINS

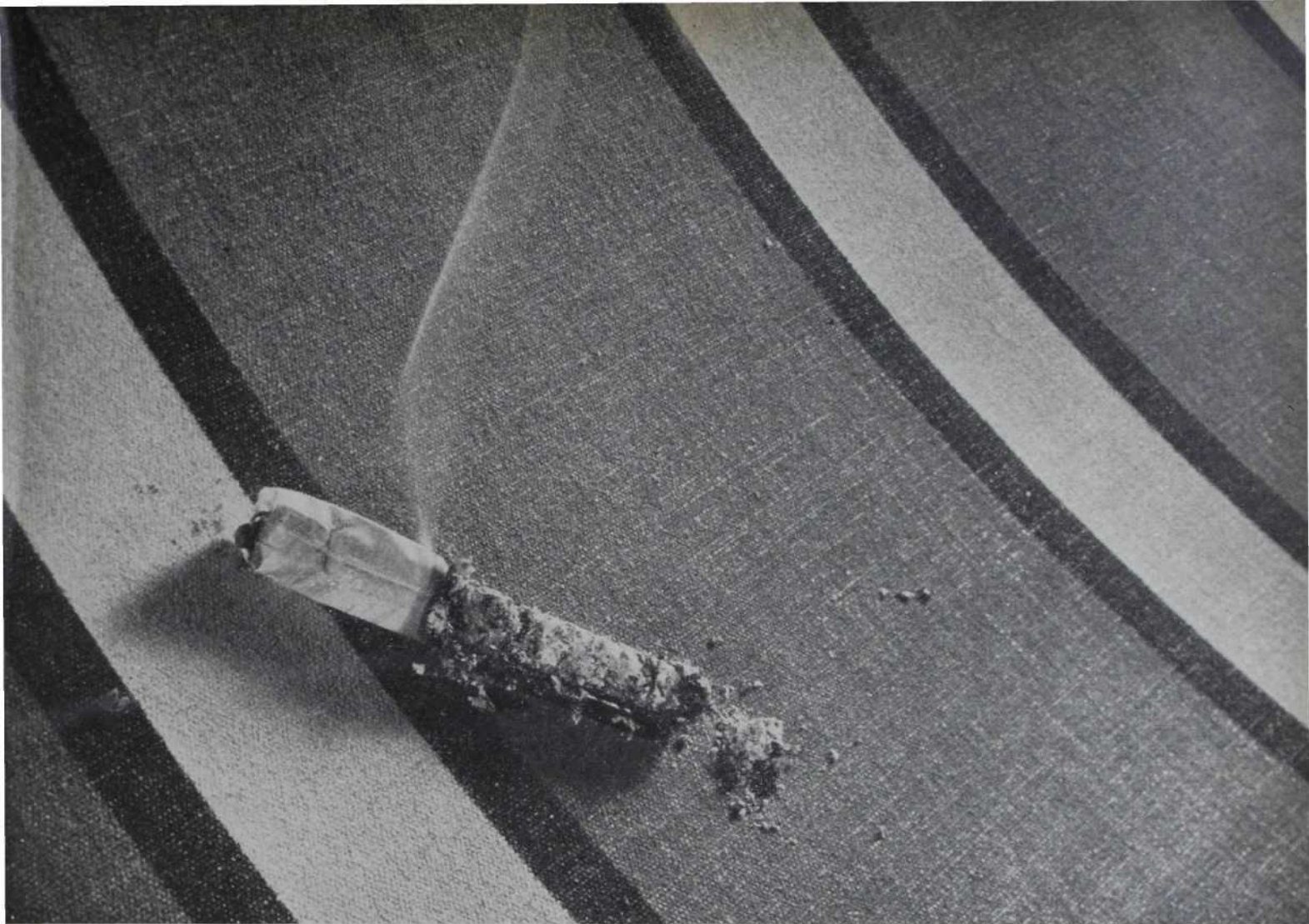
FLEXIBLE COUPLINGS

CLUTCHES

# MORSE *positive* DRIVES

MORSE CHAIN COMPANY ITHACA N. Y. DIVISION BORG-WARNER CORP.





## Why Won't This Awning *Burn?*

It's 194X (X meaning after Victory). A carelessly-thrown cigarette falls on an awning. It should start a furious fire. Yet it burns up—goes out.

A hot salamander tips against a canvas windbreak on a big construction job. Disaster in the making. The windbreak merely chars a little. Goes out.

Glowing sparks from a ship's funnel scatter over canvas hatch covers and lifeboat covers. Fire at sea — one of the greatest dreads of humanity. But these sparks gleam for a moment. Go out.

A welding torch wanders for a split second. Strikes a curtain. A nasty fire could result. But the canvas curtain only smokes for an instant. Goes out.

Why won't this Cotton Duck — normally first cousin to guncotton — burn according to its birthright?

Because HOOPERWOOD "Canvas Engineering" has stepped in to make it behave according to man's desires and long-felt needs of public safety.

That and much more already has been accomplished — and is in store for you — when our entire production of HOOPERWOOD "Engineered Canvas" is no longer needed by the Armed Forces. And HOOPERWOOD "Canvas Engineering" goes on, making cotton duck an ever more useful servant of Business and Industry.

**WM. E. HOOPER & SONS CO.**

New York PHILADELPHIA Chicago  
Mills: WOODBERRY, BALTIMORE, MD.

HOOPERWOOD COTTON DUCK



## Landmarks of business progress



ABOUT 1800,  
Edmond Dégrange Sr., account-  
ant of the French Directorate,  
simplified the process of book-  
keeping for many establish-  
ments by his invention of the  
Columnar Journal-Ledger.

### Today

Among modern calculators  
Marchant sets new standards of  
speed and accuracy with

## 20 POINTS OF SUPERIORITY

Deliveries subject to  
"military" priorities



Point  
9

### The Keyboard Proof Dial

You begin every calculator computation with a keyboard setup, so your first concern is to make certain that the setup is correct.

This all-important detail is made easy by Marchant's exclusive Keyboard Dial, which gives quick-glance proof of every figure. Each key depression is automatically recorded in this dial, making it easy to check entries and to make changes instantly. Marchant requires no zig-zag hunt of depressed keys to check the keyboard setup, bringing speed, accuracy and good nature to all your calculator work.



Marchant Calculating Machine Company  
Home Office: Oakland, California, U. S. A.  
SALES AGENCIES AND MANUFACTURER'S  
SERVICE STATIONS GIVE SERVICE EVERYWHERE

## The Army Pays in Cash

(Continued from page 28)

bank account by depositing a Treasury draft or has credit established for him by telegraph or cable transfer.

From this account he pays his troops and bills in the currency in general circulation in the area. This practice avoids glutting the occupied territory with United States currency, which would tend to irritate the local merchants and bankers because of the red tape involved in exchange as well as to upset economic conditions within the area.

Conditions often alter this procedure. When United States forces landed in French North Africa, for example, they carried marked United States currency, good only in territory they occupied.

Few problems arising in Army operations would be new to Major General Loughry. He served as an enlisted man in the Spanish American War, and was graduated from West Point in 1906 as a second lieutenant in infantry. A year later he transferred to coast artillery.

In the first World War he served as adjutant of the First Division in France and took part in operations in Toul, Cantigny, the Marne, St. Mihiel and Meuse-Argonne. Later he served as Adjutant General of the First Army.

Since then he has been graduated from the Army and Navy War Colleges and served on the general staff as chief of budget and legislative planning. He was appointed Chief of the Office of Finance April 23, 1940, for a four year term.

Prompt payment is the Finance Office's watchword.

"That's a matter of morale, of civilians as well as of soldiers," one officer explained. "Of course soldiers would fight whether they were paid or not, but cash on the barrel head helps to keep the spirit up where it belongs."

The attitude of civilians toward troops occupying their land is vitally important to the welfare of those troops. That's why U. S. Army bills are paid promptly, and in the established currency.

Burning money never won medals for finance officers, but sometimes it helps. Col. Royal G. Jenks was finance officer for the Philippine Department when Japan attacked. The citation that went with his distinguished service medal, pinned on his blouse in Australia last summer, said in part:

"On the outbreak of hostilities he arranged for the continued availability of funds for the prompt payment of troops and civilians and for the large amounts of additional supplies and material procured and shipped to Bataan."

But the citation didn't mention the burning of money during those last days on Corregidor. Soldiers lighted cigarettes on \$100 bills.

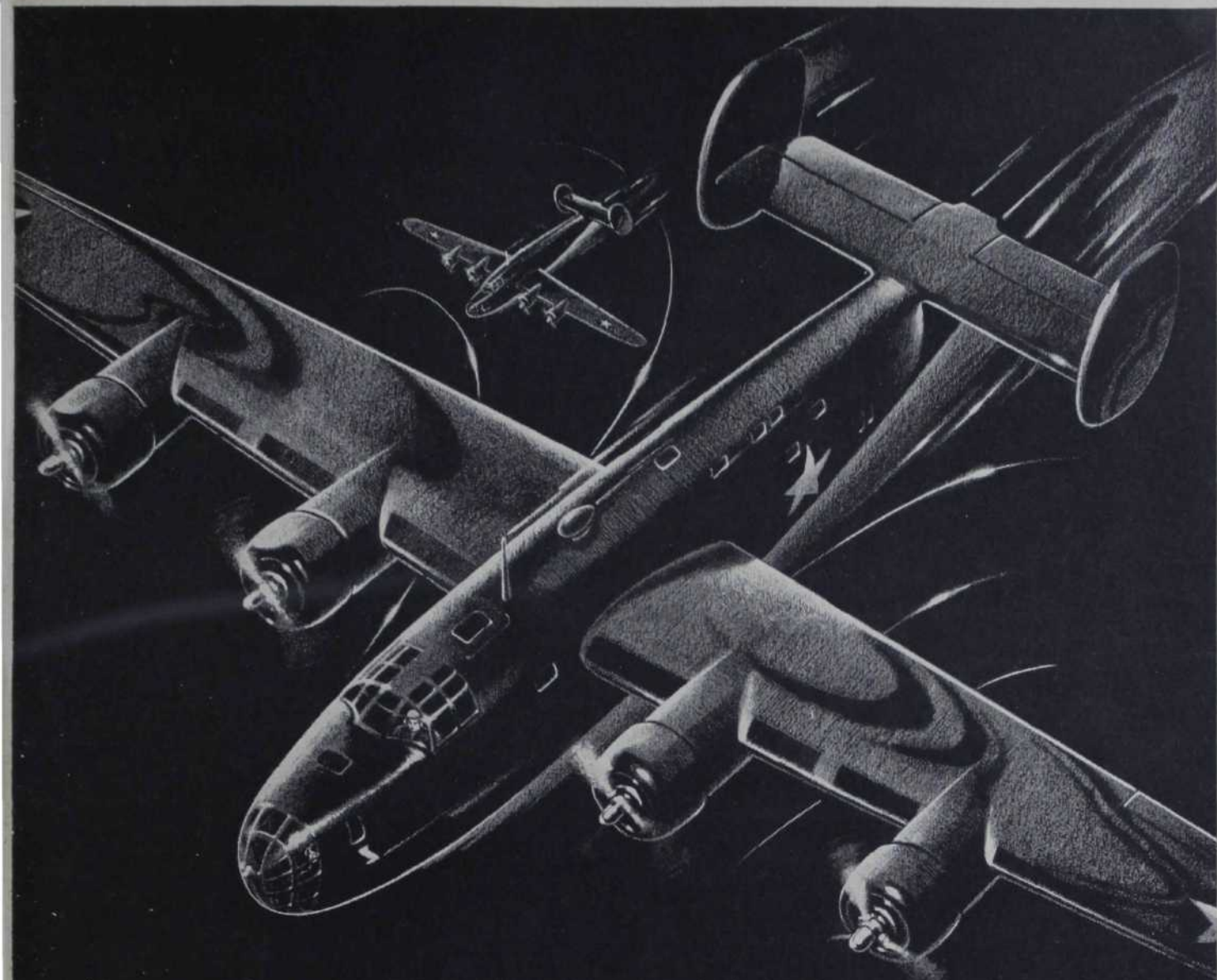
"That was one of the few joys the boys on Corregidor had," Colonel Jenks said afterward.

Millions of dollars were burned and the Japs found the vaults empty.

Otherwise they would have had American millions for use in foreign markets.







*Engines  
for our eagles of war*

Now that the all-out air offensive against the Axis is under way—here, too, Chevrolet is playing its part. . . . For Chevrolet builds huge quantities of Pratt & Whitney airplane engines, as well as anti-aircraft guns, armor-piercing shells, military trucks and countless parts for other war producers, both within and without General Motors. . . . And Chevrolet will continue to build them, in ever-increasing numbers, because

it takes **VOLUME FOR VICTORY.**

BUY U. S. WAR BONDS AND STAMPS

**CHEVROLET**  
DIVISION OF GENERAL MOTORS

BUILDING ARMS THE QUALITY WAY—FOR QUALITY MEANS LIVES TODAY



## A Young Man With Power

(Continued from page 26)

T.V.A. and such, but I know he is competent, sincere and willing to play fair with all groups."

Mr. Calder has known Mr. Krug since 1940, when the latter, then only 32, was sent as part of our Good Neighbor program, to report on the electric power situation in Costa Rica where Calder's company had millions invested. The Costa Rican legislature translated that report into what many call a "model utility law."

He and Calder met many times on negotiations. Though far apart on ideas, they managed to shake hands before and after every conference. Today, still far apart on ideas, they manage to fight a war together without fighting over domestic ideas.

Julius Albert Krug was born November 23, 1907, son of Mr. and Mrs. Julius John Krug, whose parents came to this country from Germany in Bismarck's day. The doctor who attended his mother looked at the child and asked:

"What are you going to name him?"

"Julius Albert," said the father, proudly. "Julius" was an old family name.

"Bah!" said the doctor. "He's too ugly. He looks like a pirate. I'm going to call him 'Captain Kidd.'"

The doctor's name stuck better than

the family's. The power director is still "Cap" to his friends although formally he is "J. A. Krug." He just doesn't like his given names.

Krug, Sr., now Wisconsin state fire warden, was a detective when his most famous son was born. Later he was country sheriff. That is not riches, but the elder Krug found it sufficient to send his five daughters and two sons through Wisconsin University. He is rightfully proud of that.

His son, Julius, completed the course without high honor. He wore no Phi Beta Kappa key, belonged to no fraternity. Although he had been center and captain on his high school football team, he gave up college football after his Freshman year in 1925, to Wisconsin's undoubted detriment.

James J. Hanks, also with W.P.B. today, and a chum of Mr. Krug both in high school and college, recalls that he was the kind of football player his six feet three inches and 233 pounds qualified him to be.

Economic pressure, no doubt, had a part in shortening the Krug athletic career, since he married Miss Margaret Dean, a neighborhood sweetheart, when he was 19 and just entering his sophomore year in college. Thereupon he went to work at almost anything that

came to hand. He was, in turn, a laborer on a scaffolding gang that repaired the county courthouse, helper in a cabinet-maker's shop, engine wiper in the roundhouse of the Milwaukee Road, ice-man, driver of a moving van and filling station operator.

He received his A. B. in 1929 having majored in public utilities management and economics. In another year he earned an M. A.

Then, "fortunately," he says today, he was able immediately to get a position as a business research analyst with the Wisconsin Telephone Company. He charted "business curves" for this company for two years, then was named chief of the depreciation section of the Wisconsin Public Utilities Commission. In the course of his three years with them he became friends with David Lillenthal, who is today general manager of T.V.A.

In 1935, Mr. Krug went to Washington as a public utilities expert in the Federal Communications Commission, working on the A. T. & T. investigation, a job which, his friends say, almost lost him to the New Dealers. He felt that the F.C.C. was more interested in social reform than in doing a good job.

Anyway, he went back to Wisconsin, "resolved," friends say, "never to become connected with the federal Government again."

But he had already made a reputation.

Governor A. B. (Happy) Chandler, now senator, of Kentucky, asked his help in cleaning up the utilities situation in that state. Krug is rather proud of his work there, where he was "technical director of the Kentucky Public Service Commission."

"Everybody was crying 'politics' at what Happy wanted to do, but all he ever said to me was: 'Get the situation straightened out fairly, let the chips fall where they may.'"

After the disastrous Ohio River Flood in '37, it was Krug's job to make recommendations for utilities to follow in making new installations on the Kentucky side of the river. No private utilities engineer ever disagreed with his recommendations.

### Into a hornets' nest

ALL during this period, T.V.A. had been angling for Mr. Krug's services.

"We're not like the bureaus in Washington," was the reported plea they used to win him over. He became their chief power engineer when he was 30.

"And, while I was receiving congratulations from my friends, I dropped into a hornets' nest."

That was the so-called 18-company case in Chattanooga, in which the private power companies were making a futile rear-guard stand against T.V.A. That fight gave him confidence in T.V.A. and the men in it.

"It was inspiring to see the T.V.A. lawyers work until midnight every night to cinch that case," he recalls today. "It proved to me that the men at T.V.A. were there for something besides the money or their jobs."

He believed, too, that "T.V.A. is the practical application of Democratic

## WOODWARD GOVERNOR COMPANY SPEEDS VITAL AIRCRAFT PARTS WITH KARDEX PRODUCTION CONTROL



**68%** OF ARMY-NAVY  
"E" WINNERS USE  
KARDEX PRODUCTION CONTROLS

**KARDEX**  
visible systems of  
ADMINISTRATIVE  
CONTROL

**REMINGTON RAND INC.**



## "WHEN THE LAST BOMB GOES HOME..."

"Some dawn, our orders will come in.

"In the mist and the half light, we'll 'bomb up' as always. Strap on our parachutes. Take our places. Buckle our safety straps.

"Once again . . . familiar thunder will burst about our ears as the motors are gunned and the props bite bright circles in the air. Under our rumbling wheels the runway will tremble. Once more, the long driving rush and roar as we take to the sky!

"Some day, the cross-hairs of my sight will center a target. And at the cry 'Bombs away,' the last train will leave the bay and the last bomb will begin its long curved run to earth.

"And in its dull, exploding echoes, I shall hear the sullen crumble of walls, the crash of falling masonry and shattering glass, as the very name of the last stronghold of hate and lust and tyranny is purged forever from the world in one final burst of flame!

"Then—I'll turn homeward in the dusk. Home to my country, home to my town where I want unchanged, just as I left it, everything that is America to me. Everything! I hope they haven't even fixed the fence where the third picket from the gate was missing!

"Out here, America has come to mean just this to me . . . a country where I can live the way my folks and I have always lived . . . a coun-

try where there's work to do, where no one is ashamed to work, where there are no limits on a man's ambition or his opportunity to go as far as ability can take him—to grow as great as he wants to be. Whatever you do, don't change that, ever! I know now—that's what I'm fighting for!"

*Here at Nash-Kelvinator, we're building giant new 2,000 horsepower engines for U. S. Navy Corsair fighters . . . propellers for United Nations bombers . . . working to hurry the day when our boys will come home again, the day when we'll turn again to peaceful things, to the building of an even finer Kelvinator, an even greater Nash!*

NASH-KELVINATOR CORPORATION, DETROIT

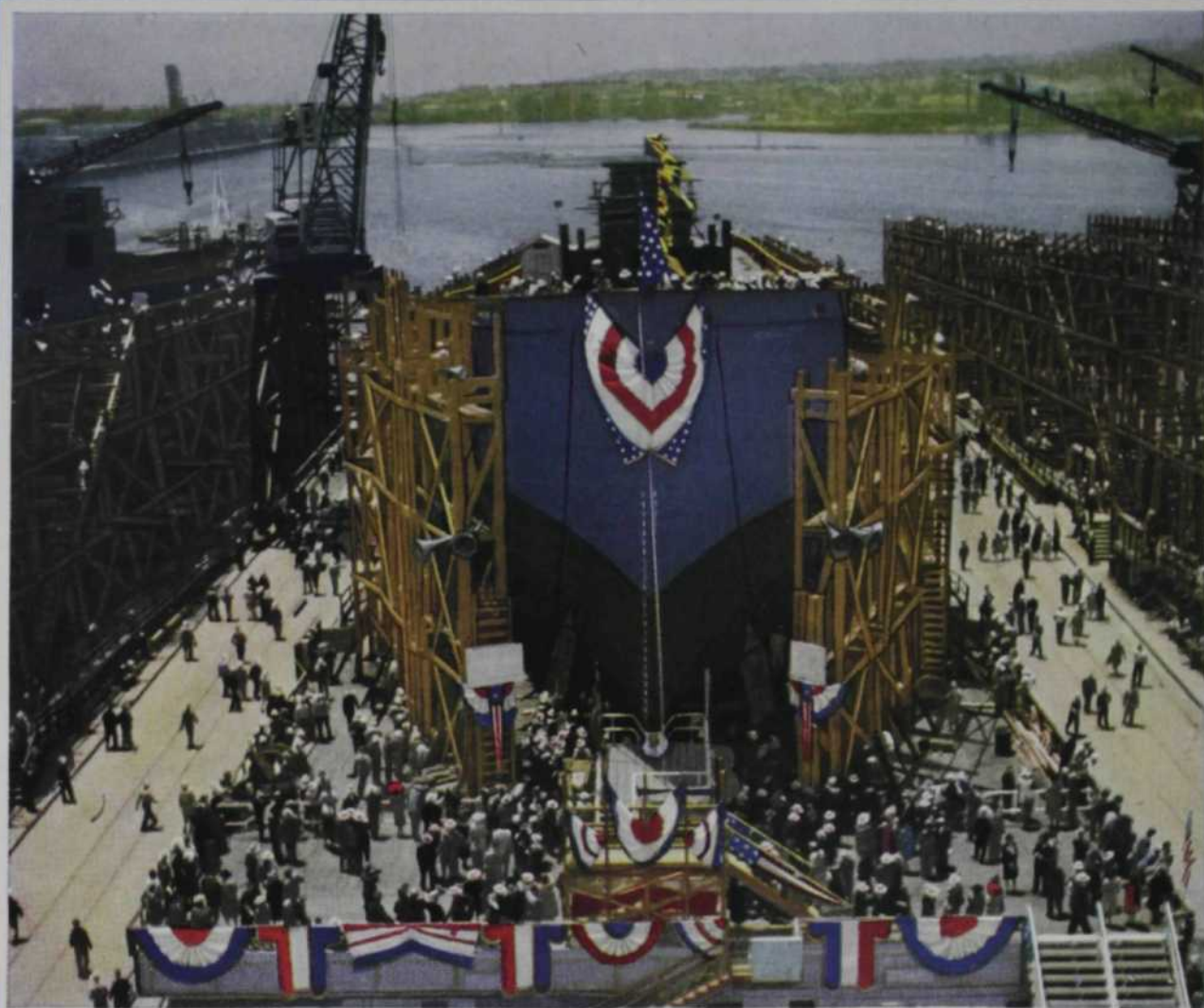


**NASH**   **KELVINATOR**

In War, Builders of Pratt & Whitney Engines and Hamilton Standard Propellers.  
In Peace, Nash Automobiles, Kelvinator Refrigerators and Appliances.

Let's Speed the Day of Victory!  
Buy More War Bonds!  
Collect More Scrap!  
Accept Rationing Cheerfully!





## PRIDE OF WORKMANSHIP

A ship launching is an occasion for pardonable pride on the part of every man-jack who sawed a board, drove a rivet, or had anything else to do with completing the job. When some lucky lady smashes that bottle against the hull, even old "Poker Face," the timekeeper, can't help but feel a slight surge of emotion. And rightly so. Any

man worth his salt has pride in good workmanship. That's certainly true of railroaders. We're quite sure that every Union Pacific employee—in shops, offices, stations, or on the rails—realizes the need for top-notch efficiency and takes pride in the fact that his railroad, with his help, is doing a bang-up job of transporting vital war materials and trainloads of troops.



*The Progressive*

### UNION PACIFIC RAILROAD

ROAD OF THE STREAMLINERS AND THE CHALLENGERS



Government to the day-by-day problems of the people. It is Government doing the kind of a job that only Government can do—developing the resources of a region on an integrated, region-wide basis. I am proud that I can play a part in developing a region that otherwise might never fulfill its destinies."

That implies no hatred for private power companies.

"It is best for the nation not to give either public ownership or private ownership too much rope."

### If it's bad, it's bad

COMPLETE public ownership of all utilities, he believes, would no doubt bring politics into action. On the other hand, he is satisfied that the private utilities as a whole were "getting away with some ungodly high profits" before T.V.A. came into the picture.

"As I see it, one bad group is as bad as another bad group," he replied recently when asked if, in his opinion, it is any worse for a privately-owned utility to try to influence politicians than for a public-owned and operated utility.

"If T.V.A. ever becomes a political organization, it will be worse for us than if a private company down there did so."

From 1938 until the deal was consummated, he was a principal negotiator for T.V.A. with Wendell L. Willkie, then president of Commonwealth & Southern, which owned the private properties T.V.A. coveted.

After T.V.A. paid Willkie \$80,000,000 for the properties, it will be recalled, Willkie boasted about the deal he had made. Krug (who was that big fellow in the newsreel pictures of Willkie getting the check) said nothing then.

Today he says, "I think we got the best of the bargain... and I believe that anyone who will study it will agree," but he admits a great deal of respect for what Commonwealth & Southern did in the Tennessee Valley.

"Willkie was a damned good salesman and he had built up that region industrially and had excellent properties."

In the days when Arthur Morgan's charges brought a Congressional investigation of T.V.A. Mr. Krug put in long hours including seven consecutive days before the investigating committee. The Congressmen treated him with respect.

When that was over he went back to help integrate the system which T.V.A. believed it should have to take a major load in case of war. In these integration deals, Mr. Krug came to know (and like) personally many of the top men in private companies.

Under him, too, T.V.A. initiated a construction program, building a large steam plant at Watts Bar and the Cherokee Dam in East Tennessee. The latter was the fastest construction job in American history until that time. The money was appropriated by Congress in 1940 and less than two years later power was being generated.

Came 1941 and William L. (Bill) Batt at O.P.M. was looking for some one "to handle power who would be acceptable to men who were for and men who were against public ownership; but I didn't want a tight-rope artist."

He didn't know Mr. Krug but he had heard much about his propensity for hard work and straight thinking.

"He was unbiased and no man in America who knew the power business was more acceptable to all concerned."

So Mr. Krug became chief of the O.P.M. power branch and, when O.P.M. became W.P.B., he was named deputy director of priorities and allocations under Mr. Batt, a position he held until his latest promotion.

T.V.A. still pays his \$9,500 salary—he's had one raise of \$500 a year since he joined the agency—and he hopes to return to them after the war although he gets pleasure from the fact that private companies have offered to pay him three times as much. But he wants more than money from a job—although:

"The only real insurance a man has is his ability to hold his job. A man attains social security in his heart only by realizing that, come what may, he can make his way."

He has more than 600 employees in O.W.U., which supersedes rather than displaces kindred peace-time agencies, but he has no intentions of sitting in his office and shooting out orders. He believes in moving about and he might be in Los Angeles today and Maine next week.

Speaking for his employees, he says: "We don't intend to run the electric utilities, gas companies, water companies, telephone companies and other communications systems from Washington. We expect to set up sensible poli-

cies, but let the utilities carry the ball. This is no time for a one-man team."

His job entails enforcing his directives, as well as issuing them. Also, he has taken on the job of scheduling equipment for all power companies and related enterprises that fall under him.

The men who head up the four divisions of O.W.U.—power, water, gas and communications—under Mr. Krug are:

Power—Barclay Sickler, formerly with the Bonneville Power Administration.

Water—Arthur Gorman, assistant city engineer of Chicago.

Gas—Alexander Macomber who owns a number of smaller gas properties.

Communications—Leighton Peeples, who has long been in Government.

Today Mr. Krug lives with his wife and two small children—Marilyn and James Allen ("No Julius in my family") in an attractive Washington suburb. He drives his 1941 Oldsmobile once a week when it is his turn to bring his car-club associates into town. He is classified 3-A in the draft, is a member of the Emmanuel Evangelical Church, takes a friendly drink, does not smoke and works 70 to 80 hours a week.

With peace, he hopes to move back to his government-owned house in Norris, Tenn., where his furniture is now and where most folks vote Republican.

"More Republicans work for T.V.A. than Democrats."

But it doesn't have to be that way.

"Hell, before I ever become frightened of any one I'll go back to driving a moving van. Or work with a pick and shovel."

## The NATURAL INDUSTRIAL CENTER of the WEST

### "Strategic materials, John..."

"Strategic in war, strategic in *postwar*...that's why I'm interested in Metropolitan Oakland Area. It's the logical industrial center of those Eleven Western States where most of our raw materials come from.

"Why ship those materials east, and then pay big freight charges to get our finished goods back to the Coast markets? We'll make our stuff *out there*!"

"John, we've got to get our Metropolitan Oakland Area plant down on paper NOW, so we can jump into the Western picture the minute the war comes to an end."

**METROPOLITAN  
OAKLAND AREA**  
CALIFORNIA

ALAMEDA • ALBANY • BERKELEY • EMERYVILLE • HAYWARD • LIVERMORE • OAKLAND • PIEDMONT • PLEASANTON • SAN LEANDRO • RURAL COMMUNITIES OF ALAMEDA COUNTY

**MAGNESIUM**, chlorine, chrome, manganese, tungsten, rubber, lumber, cotton, steel, and many more are produced in the West.

Add most central location in relation to huge markets...most favorable distribution costs...unexcelled factory sites...enormously increased hydroelectric power...a great reservoir of skilled labor...and you begin to get the outline of our story.

Why not ask us to fill in the details? In a *Special Survey* directly applied to your particular operation.

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389 Chamber of Commerce Building  
Oakland, California 2311



# Fettering Business by Proxy

**NEW S.E.C. rules require company officials to  
circulate attacks on concern among stockholders**

**I**F MILLIONS of shareholders in American business enterprises suddenly begin to wonder why their annual reports have become cold, dry statements of formal statistics, they should look to the Federal Securities Exchange Commission for the answer.

The Commission has marched to war again against management, this time with a new set of proxy rules piling further burdens on management and practically guaranteeing that annual reports will be less informative and more technical than ever before. Further, they will increase the already serious reluctance of able men to subject themselves to the hazards which the Commission has set up for directors and officers of private business.

The new rules require, among other things:

1. That proxy statements must include submission of any proposal offered by any security owner for action at the stockholders' meeting, and a 100-word statement prepared by the person submitting the proposal, explaining it.
2. That the annual report shall be considered proxy-soliciting material, thus making every director and officer responsible under the stringent criminal and injunctive provisions, and possibly under the civil provisions, of the Securities Exchange Act for every word included in the report.

Management men point out that the first proposition throws the doors wide open and puts out the welcome mat for

any kind of libel or vicious attack which any shareholder may care to make on company officers and directors. There is no standard of responsibility, nor even of coherence. The only requirement is that the person submitting a proposal must own at least one share of stock. Thus, by dipping lightly into its treasury for single-share purchases in many companies, the Communist party could force those companies to propagandize their own stockholders along any line the Communists chose.

How officers feel about the second proposition is indicated in the recent annual report of the Monsanto Chemical Company, whose president, Edgar M. Queeny, tells his stockholders that the company's practice of transmitting informative and interpretative annual reports must be abandoned:

"Until the true import of these new regulations is established or clarified by subsequent modification, or until they are withdrawn, no prudent course seems open other than limiting annual reports to terse statements of fact, verified at the time by independent auditors."

Mr. Queeny adds that the company will continue sending its house organ to all stockholders and will try by this means to keep stockholders informed.

The president of another outstanding war industry estimates that, under the new S.E.C. rules, proxy statements submitted by management must be three times as long as under the old rules, and that the work and expense incident thereto will be multiplied many times.

The old rules, for example, required simply a description of any substantial interest of a director or his associates in any property which the company had acquired within two years or proposed to acquire other than property acquired in the ordinary course of business. The new rules require a description of "any interest direct or indirect of each person who has acted as a director of the issuer during the past year and each person nominated for election as a director and any associates of such director or nominee in any transaction during the past year or in any proposed transaction to which the issuer or any subsidiary was or is to be a party."

The new rules are the handiwork of Milton V. Freeman, member of S.E.C.'s legal staff, who is said to have stated before the rules were promulgated that the S.E.C. had received letters "from all over the country" demanding revision of the proxy rules. Later, he admitted that such letters had been received from only 25 stockholders—out of the many millions of stockholders in the country.

Ganson Purcell, S.E.C. chairman, said in a recent speech that "we see more and more today instances of management feathering its nest at the expense of its stockholders."

To which an outstanding businessman replied:

"When American industry is doing such a magnificent job in helping win the war, this type of bureaucratic harassment is worse than questionnaires and cannot be tolerated unless Congress itself indicates that this is a measure of what business in the future may expect from government."

## *We invite a forward-looking* **MACHINERY MANUFACTURER or INVENTOR**

**to plan with us NOW for post-war expansion**

War work has caused us to greatly increase our productive capacity. So when peace comes, we will have the equipment and trained personnel to manufacture not only our regular line of wrapping machines, but other types of machinery or devices. You may find it profitable to take part in our planning for such post-war expansion.

For 30 years we have been one of the leading makers of packaging machinery. Our machines are used by hundreds of concerns—in the food, drug, candy, tobacco, dairy fields, etc. Many of the advancements in mechanical wrapping now widely used were conceived by our Engineering and Designing Department.

For war, we have designed and built large groups of armament machines such as cartridge loaders, cartridge-clip loaders, machines to insert cartridges into cartons, linking machines for machine-gun bullets, etc.

We are now working on ideas to expand our regular line of wrapping machines and to add other lines of machines used by industries we do not now serve.

● You may have ideas for new machinery which need development. We will be glad to discuss them with you, and if mutually satisfactory, will develop them with you.

● You may have a machine or machines which you have been making in your own plant, but which might be improved and made with greater profit in ours.

Final arrangements may result in your coming into our Company—or may be worked out on some other desirable basis.

If you feel that you have something on which we might work together, we suggest that you communicate with us, giving full particulars. We can then arrange for a meeting.

**PACKAGE MACHINERY COMPANY • Springfield, Mass.**



# THE *Milwaukee Road*

## 11,000-MILE SUPPLY LINE

### for war and home fronts



UNCLE SAM has a mighty wartime transportation asset in the strategic Milwaukee Road.

It serves the dynamic midwest with a vast network of lines, stretches out across the grain and cattle country of the great plains and intermountain states, on into the green and growing northwest. In all, there are twelve Milwaukee Road States of America, each wide in territory, bountiful in resources, rich in opportunity, where enormous quantities of basic commodities and finished products originate.

Passenger traffic on The Milwaukee Road is running two, often three times higher than in recent pre-war years—and the volume of freight traffic is reaching new peaks. Yet, thanks to the cooperation of the government, civilian passengers and shippers, this tremendous extra load is being handled without delay to the war program.

Every resource and every facility of this 11,000-mile supply line are intensively on the job, 24 hours every day, helping to win the "war of movement" on the home front in order to insure success on the fighting fronts.

For 92 years, The Milwaukee Road has played a big part in our nation's progress. And to a man and a woman, 35,000 loyal Milwaukee Road employees are determined that they shall not fail America now.

#### WHAT STATES SERVED BY THE MILWAUKEE ROAD PRODUCE

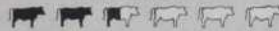
##### GRAIN



##### DAIRY PRODUCTS



##### LIVESTOCK



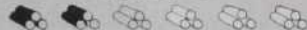
##### WOOL



##### LEATHER



##### LUMBER



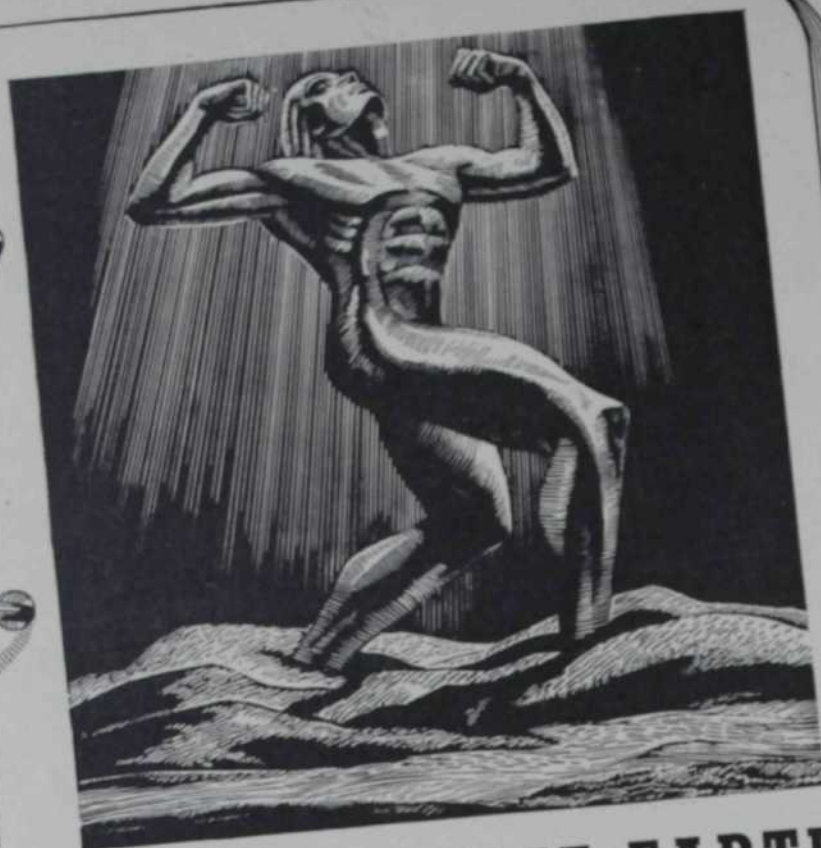
##### METALS



##### FACTORY PRODUCTS







## GIANTS IN THE EARTH WAITING...THROUGH COUNTLESS CENTURIES TO FIGHT FOR VICTORY

Slowly through the ages these Giants in the Earth have been gathering their strength. Now they are ready—the mighty mineral resources of North Carolina—to fight for Victory. Investigate... Now!

**IRON** Millions of tons of magnetic iron ores especially suitable for the production of Sponge Iron which as "melting stock" can greatly relieve the scrap shortage.

**COAL** Suitable for iron production, 10,000 to 12,000 cubic feet of gas, 70% metallurgical coke, 11 lbs. coal tar products and 25 lbs. ammonium sulphate per ton.

**MAGNESIUM** The largest mapped resources for Magnesium Metal in the world in olivine deposits running 48% magnesia associated with chromite, nickel and vermiculite.

**MANGANESE** Tremendous deposits running to 30% manganese.

**CORUNDUM** This mineral of diamond-like hardness and badly needed for machining and finishing metals is found in North Carolina. Also large quantities of other natural abrasives such as garnets.

**MICA** North Carolina is producing more than 70% of the nation's output of precious Mica, yet hundreds of rich mines are waiting to be developed for highly profitable operation.

North Carolina has power available for war production. Labor is 99% American born—loyal, efficient. Climate is a helpful partner to efficient production. The tax structure of North Carolina is sound. Write today for full information. Address, Commerce and Industry Division, 3080 Department of Conservation and Development, Raleigh, North Carolina.

# NORTH CAROLINA

## Employment in War, Why Not in Peace?

(Continued from page 34)

once more the scope of production and demand. Price and costs take over the functions now exercised by the Government. Price and costs reflect the restored consumer's freedom of choice which is largely eliminated during the war.

But, as soon as that happens, the Government loses control over the economic life and particularly over the extent of employment and unemployment. We have excellent reason to believe that the war boom may be followed—immediately or after a short interval—by a peace boom. An enormous demand pent up in the lean war years will flood the market.

### We need reserves

TO ACHIEVE satisfactory employment in this period immediately after the war will not require much government intervention. The problem will become acute when that first rush is over and business has to find its new "normal" equilibrium.

Will we have "full employment" by that time, and can we maintain full employment? If we could, it would be undesirable. What we have now is not full employment but overemployment which can be borne only as long as the war emergency. Human society cannot run all the time at top speed. We need reserves in manpower as well as in machine capacity. Cyclical fluctuations are the engines of economic progress. Even the Beveridge Report assumes an average of 8½ per cent unemployment through good years and bad. That may be undue pessimism, but Beveridge is too good and wise an economist to adopt the naive postulate of "full employment."

We can maintain a high degree of employment (and take care of the temporarily unemployed) if we behave wisely. That wisdom must cover the entire field of domestic and foreign policy. Yet, all the wisdom and power of the United States cannot control all the factors relevant to economic prosperity. No amount of public works, and budget deficits, for that matter, can offset the depression of entrepreneurial confidence however that depression originates.

No amount of public works and of billions spent can compensate for the paralyzing influence from breaking world commodity markets or shrinking world trade. No amount of public works or deficit spending can counterbalance a tax policy that is apt to stifle the spirit of venture and innovation.

In other words, high employment is no economic program in itself, but it may well be the result of a reasonable economic program. To keep high employment steady and to mitigate the cyclical fluctuations, the Government can do a great deal. But in a free country at peace the Government's position can only be that of an auxiliary, not of a domineering force. Otherwise we shall be neither a free country, nor have peace, nor enjoy prosperity.

The content of such a program and the



# Here Lived the Conscience of Democracy



WHEN the immortal Jefferson was Secretary of State in the early, troubled days of the Republic, he lived at 57 Maiden Lane, New York. Not as picturesque or as celebrated as his famous establishment at Monticello, the residence at Maiden Lane is none the less associated with many significant incidents in the history of our country.

As we celebrate the bicentenary of Thomas Jefferson's birth this year, it is worthy of note that many happy coincidences exist in Jefferson's life and in that of the Home Insurance Company. The site of his residence, above, is now the main office of the Home. The company was founded on the One Hundred and Tenth anniversary of Jefferson's birth—April 13, 1853. And therefore the Home celebrates its

Ninetieth birthday this year on the date that the nation celebrates the Two Hundredth anniversary of Jefferson's natal day.

Accordingly, it is with particular pride and pleasure as Americans that we join in the national tribute to the man who was in his lifetime the conscience, as he is today regarded as the true founder, of the American democracy which we are now fighting to defend.

*The Home, through its agents and brokers, is America's leading insurance protector of American Homes and the Homes of American Industry.*

☆ THE HOME ☆  
*Insurance Company*  
NEW YORK

FIRE ★ AUTOMOBILE ★ MARINE INSURANCE

*Ninetieth Anniversary Year*



## HAVE A DRINK OF *\*Fresh* SEA-WATER...

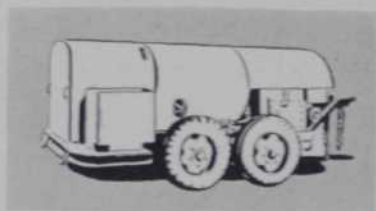


WHEREVER in action, America's fighting men are provided with every safeguard of health—pure, safe, crystal-clear drinking water particularly!

\*Common salt sea water is converted into safe, distilled water—for drinking, cooking, and other purposes—by Cleaver-Brooks distilling units. Engineers of the Army, the Navy, and the Marine Corps roll these portable units to forward areas for a dependable source of drinking water supply. Enough of them are already in service to produce millions of gallons of distilled

water daily—water so chemically pure it is fit for submarine storage battery use.

Other types of Cleaver-Brooks equipment which guard the health and welfare of fighting men are mobile disinfecting and sterilizing equipment—portable shower bath units. As a leading manufacturer of oil-fired heating equipment—steam generators and tank-car heaters—Cleaver-Brooks Company is proud to devote its engineering ability and manufacturing skill to the service of our armed forces.



# Cleaver-Brooks Company

MILWAUKEE, U.S.A.

Served by  
Cleaver-Brooks  
Products



Factory



Farm



Highway



Institution



Military

pitfalls and fallacies it must avoid should have the earnest consideration of every intelligent citizen.

If government is to provide full employment in time of peace, as it so easily does in war-time, we must accept the conditions under which government can perform such a seeming miracle. Those conditions are: A large part of the population must remain in military service; the Government must continue to be the biggest customer of industry and commerce; hope of a balanced budget must be abandoned; and, above all, there must be restrictions on what men and women shall eat, wear and enjoy.

If I understand Americans and Britishers, they accept such conditions only in time of national danger from without—as an interruption and interlude in their peaceful pursuits. Peace and liberty have a price. Like victory they are not and never can be cheap and easy.

## Let's Use All Our Strength

(Continued from page 23)

ganizations themselves, and sending them out to all parties directly interested, for criticism and comment, that they might be revised before being issued as binding regulations, was designed to safeguard so far as possible against unfairness and injustice to any industry or firm. By canvassing conditions in their industries, by furnishing technical information and advice, by their loyal readiness to cooperate with the government, the businessmen made these conservation projects possible."

"In line with the principle of united action and cooperation, hundreds of trades were organized for the first time into national associations, each responsible in a real sense for its multitude of component companies, and they were organized on the suggestion and under the supervision of the Government. . . . These associations, as they stand, are capable of carrying out purposes of greatest public benefit. . . ."

THE Bernard M. Baruch who so reported after the last war, has, in 1943, the same sound understanding of the nation's needs—and of human behavior. He sees no reason to alter his basic views.

Asked recently whether he thinks trade associations could play as important a role now as in 1918, he replied:

"I have said so before and still think that way—always providing the Government stands guard with watchful eye over the interests of the public."

The pattern of industrial mobilization for World War II is not yet frozen. The extent to which the traditional American way of getting things done—through reliance on voluntary effort—shall be called into play has not been fixed. It still isn't too late, Mr. Baruch believes, to apply the lessons of World War I to World War II.



## Coffee Filter Solves Problem

**B**BETTER Diesel engines for submarines, tanks, trucks and other vital power applications are available because Earl Patch, Moraine Products sales manager, wanted a better cup of coffee. Mr. Patch's craving for coffee set in motion a train of circumstances which has resulted in savings of millions of pounds of aluminum and other metals.

Here is the story:

Moraine Products, a pioneer in powder metallurgy, makes bearings that soak up oil the way a sponge absorbs water. One day Earl Patch brought a percolator to the office and said: "If we can make a piece of metal that will soak up oil, why can't we make a piece of metal that will drip coffee?" "Why not?" said Roland Koehring, research engineer.

They went to work.

### It tasted terrible

NEITHER man knew a thing about scientific coffee making. They experimented and experimented but without success. Then J. H. Davis, general manager, got interested. He suggested another approach. His idea worked. Out of the sintering furnace came what looks like a cake of coarse, bright-colored sand. But, unlike a sand cake, it didn't crumble. Made with the cake as a filter the first cup of coffee was perfect.

The second was fair.

The third was terrible.

They kept at it.

From a book on coffee Patch and Koehring learned why. They read that grounds lodged in the pores of the filter turn rancid, that an expert can spot a cracked cup by the taste of the coffee.

But the story has a happy ending. The filter was just what General Motors' Diesel engineers were looking for to prevent the tiny holes in fuel injectors from clogging. Furthermore, an adaptation of this porous metal is now used as a bonding agent in new type of babbitt-lined, automobile engine main and connecting rod bearing that can carry much heavier loads than previous types.

New bearing has made possible return to iron pistons, consequent release of aluminum for war production, and saving of other strategic metals. Substitution of thin-walled, steel-backed bearings for old-style thick-walled babbitt effects considerable over-all saving of tin and lead for other war purposes.



## Banish this Saboteur of War Products

War products for our fighting forces demand the utmost in skilled workmanship and fine materials. But equally important as their production is the getting of these war products to their destinations, unbroken and unmarred, *in fighting condition*. Defective packing can undo the best of factory work. Defective packing is a saboteur of war products, one you can easily foil if you pack with KIMPAK.\*

With KIMPAK-protection, war products are cushioned from jolts, jars and rough handling in transit . . . for KIMPAK combines softness with resiliency. Breakage, chipping and chafing are well-guarded against. And because KIMPAK

is 100% grit-free, highly polished surfaces are shielded against scratches, press markings and "burning". . . . If your war product must be protected against moisture, there's a special *moisture-resistant* KIMPAK to do the job. And if leakage from glass containers is your problem, there's a type of KIMPAK that can absorb 16 times its own weight in liquids!

Manufacturers of metal, plastic, wood and glass war products are finding KIMPAK the right answer to their packing protection problems. Whether

your war product is as large as a bomber's wing or as small as a wrist pin, KIMPAK can serve you, too! Write for details today.

PACK WITH  
**Kimpak**  
MADE BY PAT. OFF. & U.S. FOREIGN COUNTRIES  
CREPED WADDING

\*KIMPAK (trade-mark) means Kimberly-Clark Wadding.



Kimberly-Clark Corporation  
Established 1872 NB-443  
Creped Wadding Division  
Neenah, Wisconsin  
Send full information about  
KIMPAK.

Name .....  
Company .....  
Address .....  
City ..... State .....





Mr. Graybeal (center) and his sons study an order that means money to 5,000 workers

*THOSE who advocate capitalism live in relatively small areas of our country—Wall Street, Detroit and Chicago's Loop. They are its beneficiaries. This little group represents only a millionth of our population but thrives on the honest toilers of the hinterland. They mislead the common people with the euphonious slogan of Free Enterprise, but millions of our citizens and thousands of our towns have no real connection with capitalism except to pay, and pay, and pay.*

—FROM CAPITALISM, THE MOLOCH

**T**HE CHANCES are you never heard of Roan Mountain, Tenn., as I had not until recently. A town of 170 persons, it is some 18 miles from Elizabethton, Tenn., which is about eight miles from Johnson City, Tenn., which is some 100 miles northeast of Knoxville.

Nobody ever goes that far up in the mountains of Upper East Tennessee to see the town, anyway. They go to see the mountain or the view from the

Once in a while, somebody like me stops to get a coke at the one little drug store in Roan Mountain town, either before or after climbing, and, occasionally, some fellow may notice a big warehouse near a clump of large oak trees down a shady side-street. Across from the warehouse and sitting in a little green meadow is a rather substantial home. Well-kept lawn. Pretty fence. An atmosphere of plenty. Two or three well-fed horses browse in the meadow.

"Who owns that place?"

"That? That belongs to G. R. Graybeal. His warehouse, too. Over t'other way, he's got a lumber yard and a purty good-sized factory. Right interesting fellow, Graybeal. Yep, right interesting fellow..."

**WHEN** OLD G. R. Graybeal, now in his sixties, arrived at the foot of Roan Mountain in 1906, Roan Mountain town had two or three rough wood houses. No conveniences, not a side-

# There's One in Every Town

By CHARLES B. SALZER

mountain, which folks say is one of the highest east of the Mississippi. In the springtime, thousands of rhododendrons bloom on its crest and everybody who can take time off from plowing makes it a point to climb the mountain at least once. People from surrounding towns used to drive up on Sunday afternoons, and a scattering of tourists come from as far away as New York to see the magnificent view.

They have to pass through Roan Mountain town, which is at the foot of the peak, and some used to park their cars there to hike up the mountain. Few of these folks ever even notice Roan Mountain town, which is no different from thousands of similar small towns.

walk, the only running water in the nearby brook.

A carpenter-of-sorts, Mr. Graybeal liked to look at the towering peaks, the forests, and to breathe the mountain air. So he settled down in a house he built with his own hands.

*THE EXISTENCE of areas where economic opportunity is relatively limited... suggest a more positive national policy of transference than has yet been developed. Measures to enable people to move to areas of greater economic opportunity will necessarily involve action at the Federal level.*

—NATIONAL RESOURCES PLANNING BOARD REPORT

His assets were those strong hands, good health, a creative mind, energy, and his carpenter's tools.

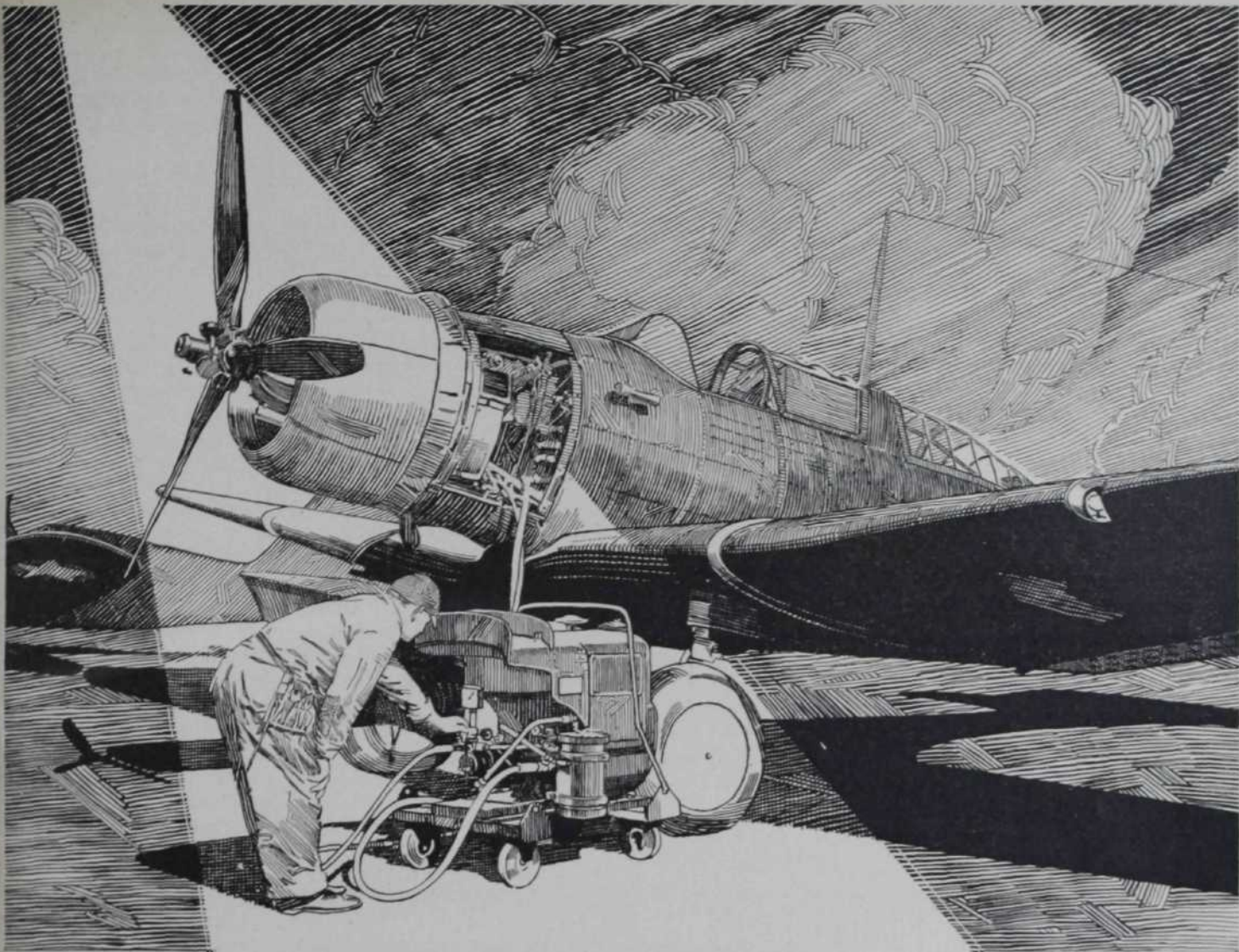
Looking around and considering his opportunities in 1906, Mr. Graybeal decided that, to prosper, he must make the forests—somehow—pay him a profit. He had heard that drug manufacturers used wild herbs, roots and berries in their operations. He wrote to a few.

As soon as he found a company that was interested in buying from him, he went hunting roots and berries. One day it dawned on him that other mountaineers might be interested in gathering these raw products for a little extra cash money. So he spread the word around. The news grapevined through the mountains that G. R. Graybeal would pay good money for mandrake roots, skink cabbage roots, spearmint herbs, sumac root bark and any number of other items that could be picked up near any log cabin.

Soon Mr. Graybeal was handling several hundred pounds of raw products each week. So he took time out to build a warehouse, again with his own skilled hands.

*NATIONAL planning implies guidance of capital uses... New industries will not just happen as the automobile industry did; they will have to be foreseen, to be argued for... or*





## Your Brother's Keeper!

This man, and this machine, are your brother's keepers . . . perhaps your son's!

The man is using a Denison HydrOILic Test Unit to test a fighter plane in which some mother's son will go out to fight. Man and machine are making sure that every hydraulically powered and controlled device in that plane is in perfect working order . . . ailerons, elevators, wing-flaps, landing gear, rudder. They're guaranteeing that if modern methods and machines can make it possible, your flyer will come through safely.

This is just one of many tasks which HydrOILic machinery and equipment are handling today. In almost every vital war industry, oil-hydraulic power and oil-hydraulic controls are working for Victory. In peace too, they will play an important part. Have you considered HydrOILics for your production problems? We may have your answer! The Denison Engineering Company, 1191 Dublin Rd., Columbus, Ohio



### Someone You Know —

*your own son, perhaps* — may be among the thousands of air force heroes who owe much of their daily safety to the behind-the-scenes performance of this HydrOILic Test Stand!



**DENISON**  
EQUIPMENT in APPLIED  
*HydrOILics*



seem probably desirable features of the whole economy before they can be entered upon.

—REXFORD GUY TUGWELL, PRESENT GOVERNOR OF PUERTO RICO

THERE must be equality of opportunity. We have never had it in this country yet . . .

—AMERICA OF THE FUTURE

THE Socialist Party's purpose is . . . when in power to transfer the ownership of industries to the people.

—FROM DECLARATION OF PRINCIPLES OF THE SOCIALIST PARTY OF THE UNITED STATES

BUSINESS seemed to pick up every year, and somewhere along the way, Mr. Graybeal began to buy furs of small animals, barks to be turned into charcoal, dried apples, animal hides, and some 100 different kinds of herbs, roots and berries. Naturally, he had to add to the warehouse many times.

Today, Mr. Graybeal gathers, through his 5,000 part-time helpers in northeast Tennessee, western North Carolina and southwest Virginia, a goodly share of all the crude drugs used in America. He has established collection stations at Jamestown (Jintown in Sergeant York's movie—remember?) and Cookeville in Tennessee and at North Wilkesboro, N. C., as well as at Roan Mountain.

These stations, started because Mr. Graybeal had only the simple desire to make money, are helping greatly in the midst of total war. They are the beginning of our drug supply's long assembly line. Many a healing pill, or dose, or medicine, would never reach a patient's lips today if Mr. Graybeal had not started it on its trip by buying the raw product from the mountaineers.

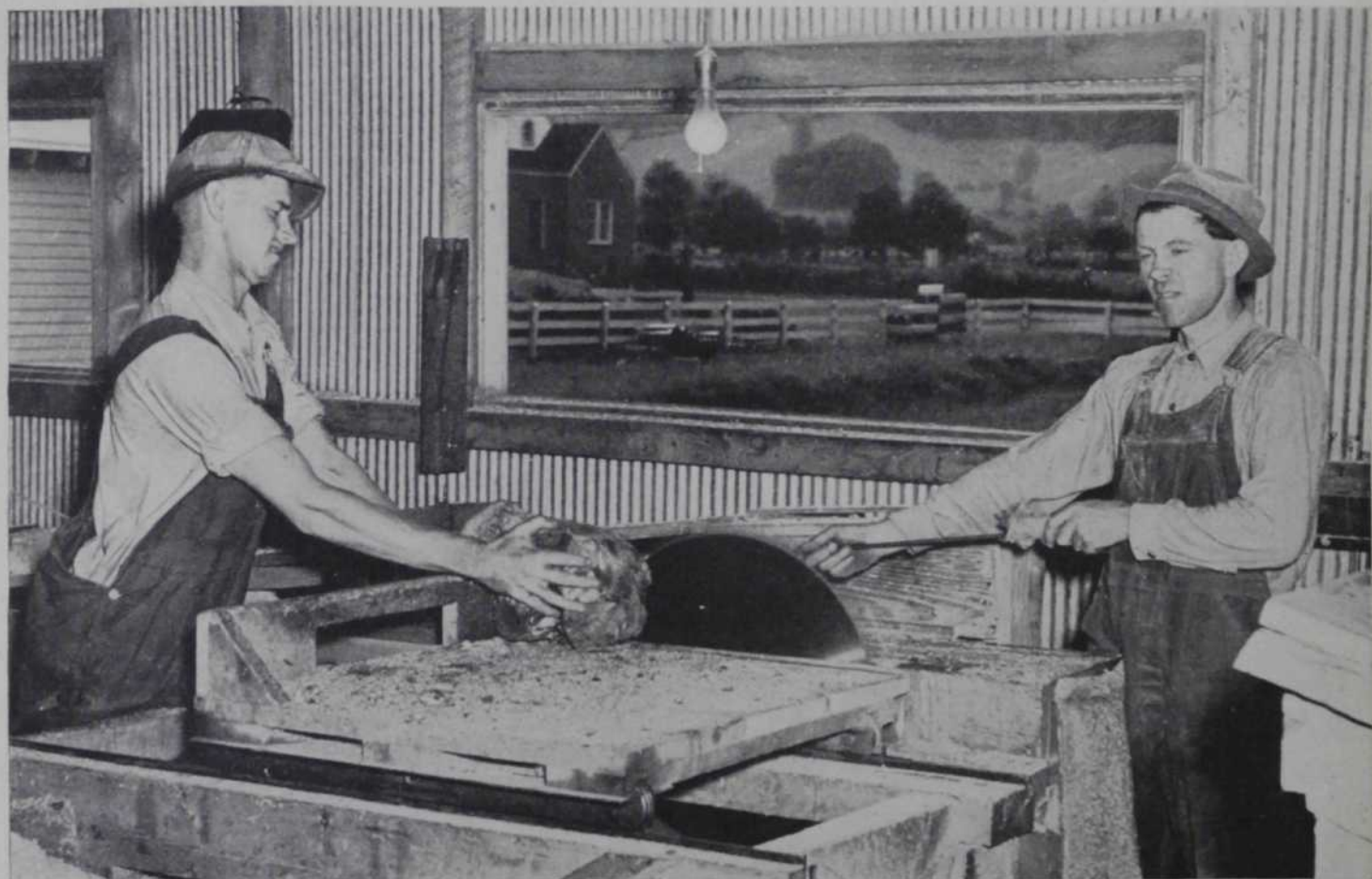
PEOPLE who worry about such things would say that Mr. Graybeal has a monopoly on the raw drug market in his vicinity today. He just says that he has no "real competition." None of the thousands of farmers who gather the raw products he buys would think of selling to others. Not because he is the only buyer, but because he has for years treated them fairly, paid the highest possible prices, learned most about how to handle men.

### Capitalism at work

MR. GRAYBEAL does more for the 5,000 persons who sell their collections to him than act as a clearing house. He and his sons keep a finger on the pulse of the market and inform the suppliers what is needed most quickly, what is most economical to gather, and how prices stand. They send out monthly report sheets to all these part-time helpers, visit mountaineers who have quit bringing in supplies and, of course, prepare the roots, barks, berries and herbs for shipment in such a way that the products will arrive at destination intact and usable.

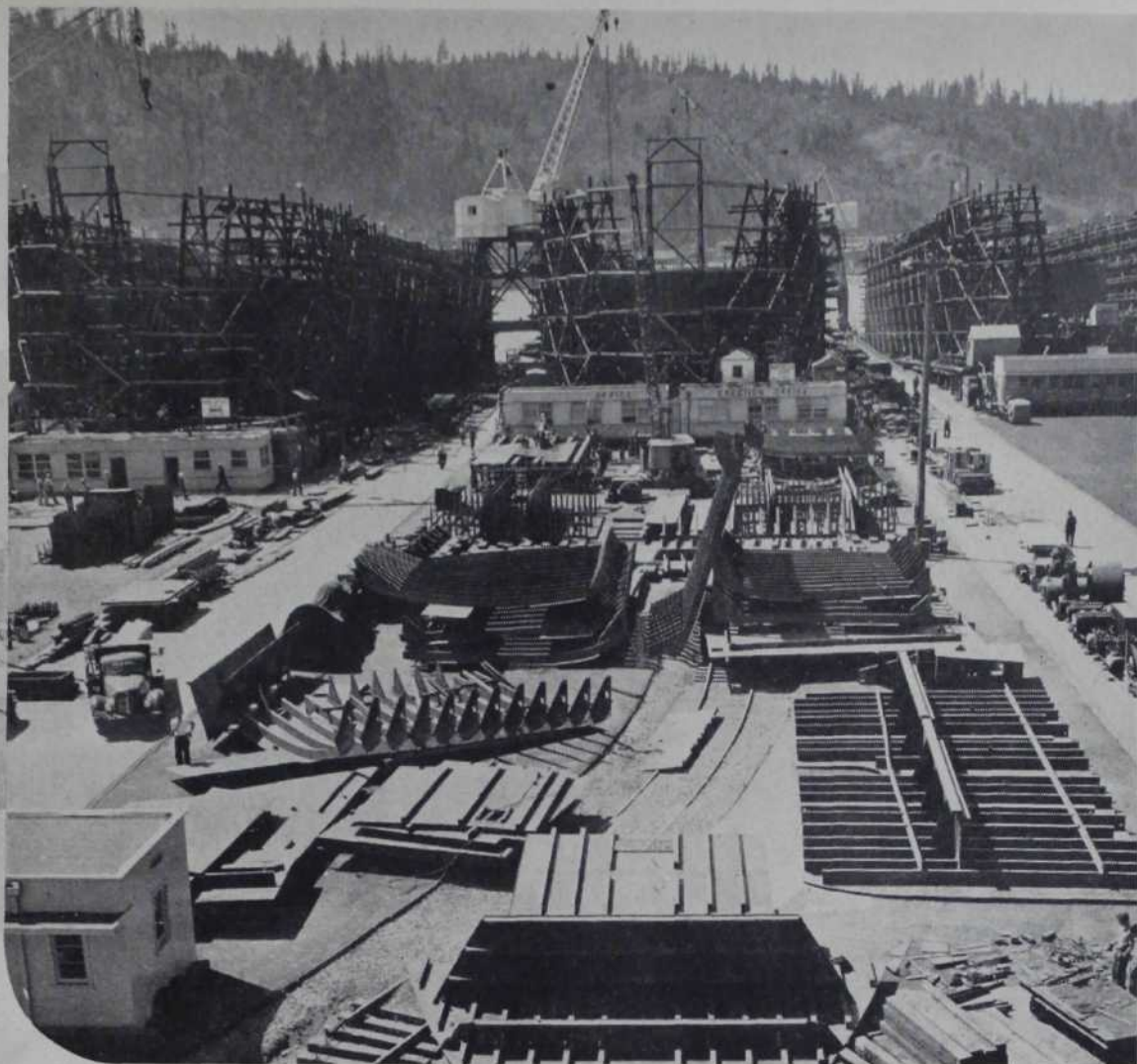
JUST as casually and carefully as he built his crude drug collection system and allied collection business, somewhere along the years, Mr. Graybeal started a lumber company. He bought his own sawmill and finished his own lumber, which he peddled wholesale to the fast-growing industrial cities nearby—Elizabethton, Johnson City, Kingsport, Bristol. Today, he has one of the largest lumber companies in the Appalachian section. And, naturally, every house that has been built in Roan Mountain town in the past three decades has been made of Graybeal lumber.

His sons, both of whom live in modern, well furnished homes of their own with their families today, are chips off the old block. They are Wayne, 32, and Byron, 30, both born in the original "home-made" house the elderly Graybeal built in 1906. They both went away for college educations but nothing they saw in the cities they visited could erase their nostalgia for the rugged life of Roan Mountain town. They are with their father today in everything he does to build a good

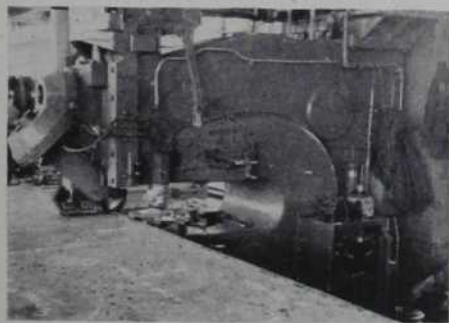


Making pipe blocks from rhododendron roots is newest Graybeal enterprise. New factory employs 20 persons, helps meet needs of smokers now denied imported pipes





## How to cut out the pieces for this STEEL Jig-Saw Puzzle



### SAVED—30 TONS OF STEEL!

By use of a joggled lap formed on a Quickwork Shear—instead of the conventional type of lap—30 TONS OF STEEL are saved and fabricating time is reduced in the construction of a single 10,000 ton ship.

Teeming ways—labyrinths of scaffolding, cranes, machines, and men. Here odd-shaped parts of a giant jig-saw puzzle are fitted together, and in record time great new ships take to the sea. Here's where we are winning our war of supply.

Many of these "jig-saw" parts are being cut out faster today by means of a machine called a Quickwork-Whiting Rotary Shear. This versatile tool cuts heavy steel plate—shears it cold—to accurate sizes on a single pass.

With standard attachments, these shears are also used to produce circles, form flanges, joggle for riveting, or bevel for welding—all at amazing speed.

It makes possible a great saving of manpower, time, and machines for builders of ships and airplanes and for other metal fabricators. The Quickwork-Whiting Shear is another product of American enterprise that is helping win the war. Whiting Corporation, 15677 Lathrop Ave., Harvey, Illinois.

TIME SAVING EQUIPMENT FOR INDUSTRY

# WHITING

## CORPORATION

CRANES and PRODUCTION EQUIPMENT for FOUNDRIES, METALWORKING, AIRCRAFT, and CHEMICAL PLANTS •  
SERVICE EQUIPMENT for RAILROADS, BUSES, and AIRLINES





*Now Unfurled* **above our plant  
to mark the achievement of  
THOSE WHO WORK "BEHIND THE LINES"**

The patriotic zeal of the men and women workers of Acme is symbolized by the Army-Navy "E" awarded for outstanding achievement in the production of war materials. Acme workers share with all Americans a stirring pride in the valorous action of our boys on the fighting fronts. Here at Acme we fully realize that the future of our families, our homes, our country depends upon the boys at the front and our ability to give them the weapons and equipment they must have. Among them are our husbands, brothers, sons. We will not let them down! We are proud of the "E" Emblem on our lapels, as a decoration for past production achievements. We accept it as a compelling challenge to even greater production in the days that lie before us.

*Acme for Action!*



**ACME PATTERN & TOOL COMPANY INC.  
DAYTON, OHIO**

Heat-Treated Aluminum Aircraft Castings • Patterns • Tools • Tool Designing • Production Processing

life—and will be there until Uncle Sam's Army gets them.

*BRIEFLY, the Government will have to enter into the direct financing of activities now supposed to be private; and a continuance of that direct financing must be inevitably that the Government ultimately will control and own those activities. . . .*

—A. A. BERLE, JR., ASST. SEC. OF STATE,  
BEFORE T.N.E.C.

MATTER of fact, these two boys have proved they have heads of their own. In Burnsville, N. C., one day they noticed that a fellow had started a little factory for making pipe blocks from rhododendron roots, later shipping these to pipe manufacturers, who made the finished product. They talked their father into starting a similar enterprise at Roan Mountain town and it has proved to be, in many respects, one of the most interesting and profitable of their businesses.

Today, 20 men are working in the pipe-block factory of G. R. Graybeal & Sons.

In addition, in an off-the-trail place like Roan Mountain, the boys uncovered enough machinery to convert a part of their pipe-block factory to manufacture of specialty wood items that go directly into war work.

### Homes for \$499

THE WAR hit their business in other ways, too. The day after priorities on building materials were announced and the W.P.B. prohibited spending more than \$500 to construct a house, except for war-workers, Mr. Graybeal and sons came out with a "victory house," which contained no metals, and which they could build for exactly \$499.

They put up several "victory houses,"—four rooms and a bath—in nearby cities before priorities and other restrictions cut the market out altogether, except for straight war housing, of which there is little near Roan Mountain.

Altogether, Mr. Graybeal and sons have 65 or more men on their pay roll all year around in the town of Roan Mountain, not to mention the 5,000-or-so gatherers whom they support, in effect. They are Roan Mountain's only and largest manufacturers and wholesalers.

"HE'S done all right for himself, that Graybeal fellow, hasn't he?" I said musingly to the druggist.

"Yep, purty well," he replied dryly. "Purty well. But he's just folks . . . and he ain't no better nor no worse than a lot of other men in a lot of other towns. There's fellers like him all through this country."

One of the natives, standing at the counter, joined in: "Pardon me, but whut kind of work do you do?"

"I write about free enterprise," I replied. "I'm looking for material for a series of articles."

He looked at me blankly.

"Success stories, you know, poor-boy-makes-good and all that kind of stuff."

"Oh. Well, you won't find none of that around here. We ain't got nuthin' but a mountain to make us famous. You oughta go to Chicago or New York, or maybe Detroit."





H. ARMSTRONG ROBERTS

## Tire Trade:

WHAT happened to the 11,000-000 tires that motorists turned in when Uncle Sam said give

**T**HE average motorist still is bewildered somewhat by the greatest tire deal in the history of America—the one in which Uncle Sam looked at everyone with more than five tires and said: "Give . . ."

We all gave, but we still have some questions:

1. Why haven't we all been paid?
2. Why were varying rates paid for the same kinds of tires turned in?
3. What became of the tires, anyway?
4. How did the great tire trade help the war effort?

You can go to half a dozen different government agencies and get as many answers. Briefly, however, the answer to those who haven't been paid—yet—lies in this fact:

Some 11,000,000 tires were turned in from Oct. 15 through Dec. 15, 1942, and the job of making that many appraisals, writing that many checks and mailing that many letters is no week-end task. Officials say that all checks should be received by April 15, but no one will guarantee this.

### The fine print said—

SOME checks sent out so far have drawn criticism, with citizens pointing out that the Government promised to pay the "retail ceiling price" on the tires turned in. However, these citizens didn't read the fine print. The government promise to pay the ceiling retail price was followed by the words: "less the cost of repairing the tire."

For example, if a motorist turned in a tire which had, say, a ceiling price of \$4.00, and the Government's agent determined that it would cost \$2.50 to put the tire into usable shape the motorist got only \$1.50. Many persons reported receiving amounts ranging from 50 cents to a dollar for tires they had considered worth many times that much.

"Our experts say that flaws not apparent to the layman existed in those tires," a government spokesman declared. "We can only reiterate that we have tried to be fair in every case—in

## BILL, THE PLATFORM MAN

It is 4 minutes to midnight—11:56 P.M.—in a Railway Express terminal. The man is a Railway Express platform man, one of many thousands stationed around the country. The package is a shipment of medical instruments. The destination—a military secret.

The package might have been some other type of war material or a commercial shipment to some factory which must "keep going". It might have been . . . anything.

To Bill, the platform man, and to any other of the thousands of employees who work for Railway Express, their job is to keep things moving so that trains and vehicles may maintain their ceaseless deliveries to the four corners of the nation.







## YOU CAN SEE I'M AT THE OFFICE, DEAR!...

TELEVISION in some practical form will undoubtedly be the next big fact of our post-war lives . . . supplementing or possibly supplanting the radio.

Whether friend husband can participate in night life, while retaining the atmosphere of the office, and get away with it, is interesting to speculate upon. Even without this particular, and somewhat wistful application, there will still be plenty of interesting features about television.

Since television in all its forms will be of an electrical nature, Cannon Connectors will be important to the many specialized phases of this future industry.



Special vibration-proof electrical connector for the propeller feathering governor on an airplane. It is designed for use where the going is tough . . . and that applies to a lot of places where Cannon Connectors are used. In tanks, planes, railroad cars, ships, submarines . . . wherever electrical connections must be made quickly and with 100% dependability, Cannon Connectors are considered vital.



### CANNON ELECTRIC

Cannon Electric Development Co., Los Angeles, Calif.

Canadian Factory and Engineering Office: Cannon Electric Co., Ltd., Toronto

REPRESENTATIVES IN PRINCIPAL CITIES — CONSULT YOUR LOCAL TELEPHONE BOOK

fact, that is one reason we have not paid off faster."

Approximately half of the turned-in tires could be repaired for immediate re-use. Jesse Jones, Secretary of Commerce, on Feb. 18, told how these tires will be returned to motorists:

"The Government sells these good tires to manufacturers, shipping the tires, freight prepaid, directly to dealers whom the manufacturers designate. The manufacturers order only tires for which they have received orders from dealers, accompanied by rationing certificates issued by O.P.A. The manufacturers honor orders from any dealer, although the dealer may not have been a regular customer.

"The government sale price is the retail ceiling price, as determined by government appraisers, less cost of needed repairs, less 44 per cent. The manufacturers agree that, of this 44 per cent, not less than 30 per cent will be allowed to the wholesale and retail dealers together. The manufacturer is allowed 14 per cent."

### Buying own tires back

MANY of these usable tires already are for sale to the public, and, conceivably, some men are buying tires today which they turned in to the Government last winter.

The 5,500,000 irreparable tires are sold to the Rubber Reserve Corporation, an R.F.C. subsidiary, which either ships them to a government-owned reclaiming plant, or sells them by the pound to privately-owned reclaiming plants. This reclaimed rubber, sold to manufacturers of tires and other rubber goods, eventually gets back to the motorist, or into the armed services, in one form or another.

No less than six government agencies had a direct hand in the tire trade. O.P.A. ordered the action. Defense Supplies Corporation, a subsidiary of R.F.C., was the buying agent. W.P.B., through Czar William Jeffers, undoubtedly hovered over the whole transaction. Rubber Reserve Corporation entered the picture, as noted, and, of course, the paymaster was Uncle Sam himself, through Federal Reserve.

The private businesses touching the turned-in tires include the Railway Express Agency, which handled the collection, the manufacturers, who agreed to handle the usable tires, and the thousands of wholesale and retail dealers, who put the purchased tires back into circulation.

How did all this help the war effort? The answer to that question is another question. Some folks say it was an obvious, needed move to get millions of pounds of rubber quickly for the armed services, or essential civilian motorists. Others say that it was an injustice to motorists who had had the foresight to buy tires they knew they would need in the future and that the deal meant a financial loss to many of them.

Everybody agrees, however, that the American motorist came through magnificently when the call was sounded and O.P.A. reported only scattered cases of non-compliance.





**YOU DON'T CARRY *THESE*  
IN A CARTRIDGE BELT...**



**T**HIS is a 16-inch naval shell. Filled with high explosives, it will pierce and tear armor plate to shreds at a range of more than 16 miles. In one hour, a battleship can hurl over 500 tons of this hell-raising steel. That's pouring it out!

This terrific fire power demands efficient delivery of shells from magazines below deck to turrets above. It calls for perfect timing—for safe, swift, accurate handling. But you can't carry them in cartridge belts—not *these* babies!

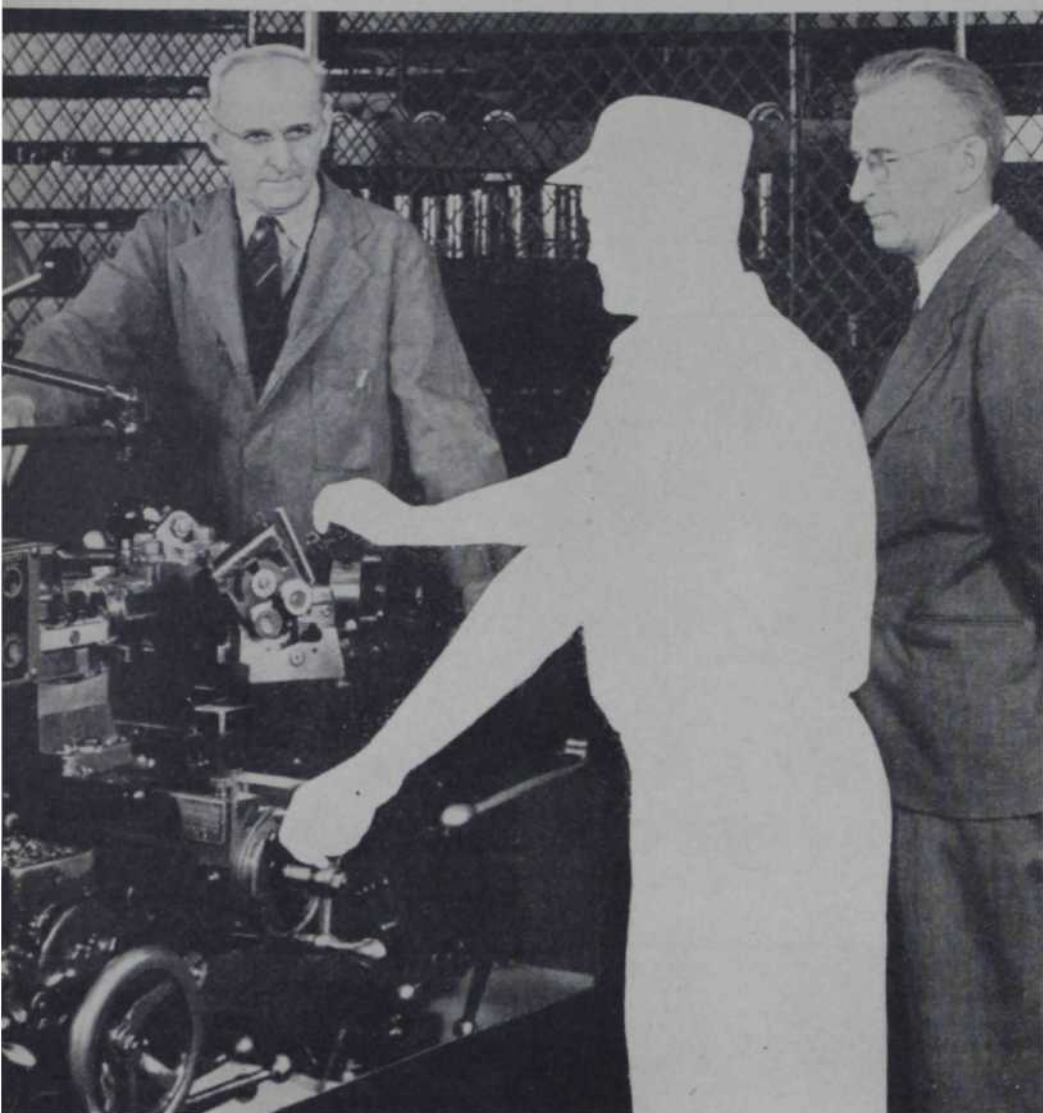
That's another job for P&H Electric Hoists. The details are secret, of course. But here, again, P&H's years of experience in building electrical equipment have been put to vital wartime use. In like manner, other P&H products such as Electric Cranes, Welding Equipment and Excavators are saving man-power and speeding war production towards Victory.





# "That's a New Word to Me"

By Warrant Machinist JAMES D. FOX



ARMSTRONG ROBERTS

**WE WERE** wondering what we could write about "Absenteeism" when a staff member met Mr. Fox

**W**E WENT into Guadalcanal at dawn August 7. The Marine Corps had been training for that kind of a job for two years. Everybody knew what he was expected to do and everybody did it.

We went in so fast that we were practically at the Japs' breakfast tables before they knew we were coming. They went away. But they didn't go very far or stay very long.

That afternoon they were back with 47 torpedo bombers. We were unloading cargo. That was one of our biggest jobs and a continuing one—when we had any cargo to unload. The bombers roared in six or eight feet above the

water but we were trained for that, too. The boats maneuvered into position and the gunners stayed at their posts and let them have it. They got all 47 of them.

After that, I was one of 178 men picked to set up a naval defense base. Our job was to take Marines on raids to wipe out the Japs, repair motors and handle cargo. We unloaded 30,000 tons altogether; once we handled 3,400 tons in 19 hours, which is faster than it can be loaded in San Francisco. That was done under fire, too. In 90 days we had 112 bombings and 60 shellings from ships that sneaked in at night to bombard our positions.

That was real man's work. Landing boats brought cargo from the ships but ashore we had no docks or handling equipment. Everything had to be man-handled and some of the stuff we needed worst—I can't say what it was—weighed a couple of tons. The heat was terrific and the mosquitos enormous. Mostly we didn't get any sleep, either. We tried to sleep in slit trenches, dugouts, fox holes or just under the cocoanut trees. The only tents we had were those the Japs had left. Part of the time we were hungry, too. For two weeks the only food we had was captured Japanese rice and barley. It was plenty wormy, but we called the worms "fresh meat" and ate the stuff. When food did come, the first boxes off the ship were full of American rice.

## Too mad to complain

WE called the place "Sleepless Lagoon" and let it go at that. I never heard anybody complain—we were just too damn mad inside—and I never heard the word "absenteeism" until I got back to this country.

I can't understand that. The men on Guadalcanal did what they did because they felt that the whole country was behind them. Now that I've come back people tell me that is true. But sometimes I wonder.

I remember one day a Jap bomb hit a landing boat that was bringing in aviation gasoline. It went up in flames, blowing the crew into the water with burning gasoline all around them. A coxswain, "Shanghai" Wright, drove his own landing boat into the flames and got those men out.

Somehow I can't imagine him staying home from work because the busses were crowded or because he had a headache or because he was tired. I've seen coxswains collapse right at the wheel and men drop in their tracks unloading cargo. If they were in the way where they fell somebody dragged them to one side and let them lay.

I've watched Marines deliberately move around in the jungle to draw fire so that Jap snipers would expose their position. I helped one do that one night, though not on purpose.

I'd gone to a tent to pick up some

Warrant Officer Fox, a native of Pennsylvania, joined the Coast Guard five years ago as a surfman. He went to Guadalcanal as a Machinists' Mate, first class, and won his promotion as the result of a citation for meritorious service.





## Stretch... **WITHOUT RUBBER!**

WHEN the covetous arm of Japan stretched down through Malaya, a great deal of stretch went out of American woven articles which contribute to everyday living. Shortages in the nation's supplies of natural rubber meant curtailment of the manufacture of elastic fabrics for civilian use... and a threat to the needs of the country's armed forces.

Today, because of research, it is possible to make elastic fabrics without an ounce of rubber.

How? With a new type of yarn called Vinyon\* E. Vinyon E is a man-made resin textile fiber which can be stretched up to five times its original length. Woven into surgical stockings and knee braces, tapes, cords, belts, and other articles where "give" is needed, it has advantages over natural rubber.

The fact that Vinyon E is less elastic than rubber is one of its chief advantages. Vinyon's lazy stretch and recovery mean gentler control and more human comfort.

Today, elastics made of Vinyon E yarns are all going to the military. Tomorrow you may expect more comfortable, longer-wearing girdles, corsets, bathing suits and other articles of wearing apparel made of this wonder material.

We do not make fabricated articles of Vinyon, save experimentally. We make only the yarn. Research towards solving many other problems with rayon, Vinyon, and other man-made yarns is a continuing project with American Viscose Corporation. You may depend upon this research to contribute much to your welfare and happiness in the future.



## AMERICAN VISCOSÉ CORPORATION

*Producers of CROWN\*\* Rayon Yarns and Staple Fibers*

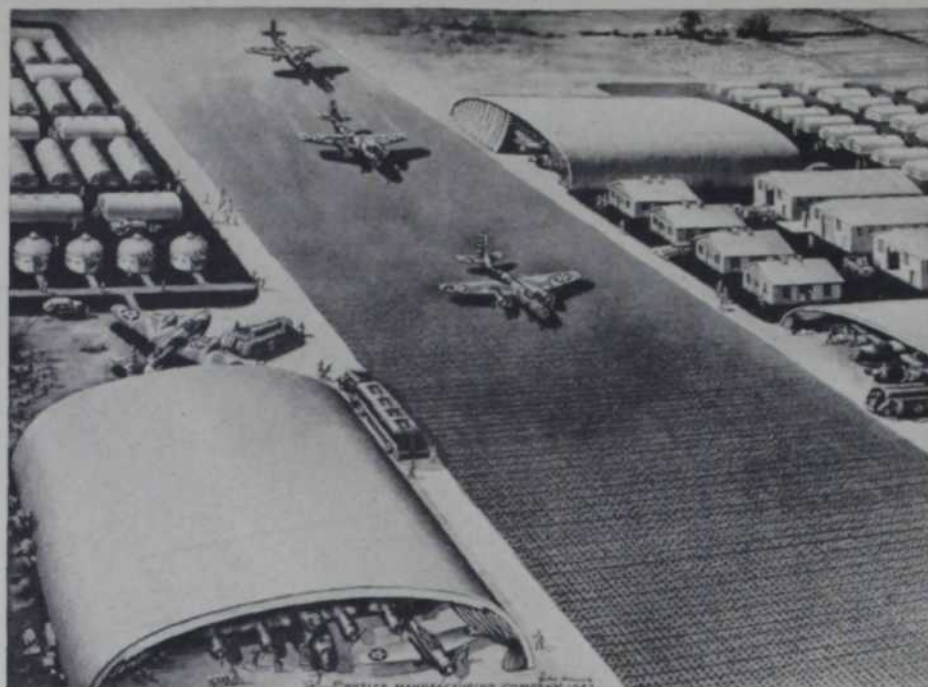
*Sales Offices: 350 Fifth Avenue, New York City; Providence, R. I.; Charlotte, N. C.; Philadelphia, Pa.*

★ **BUY UNITED STATES WAR BONDS AND STAMPS** ★

\*T. M. —C. & C. C. G. \*\*Reg. U.S. Pat. Off.

Copyright, 1943—American Viscose Corp.





## The Lines That Form Shall Never Break Because Of Things We Failed To Make

This pledge was inspired by a poem by a marine somewhere in the Pacific. It was made by Butler metal crafters to all our armed forces upon receiving the Army-Navy E Award.

Supreme as are our aircraft, they cannot take off and land on jungle swamp, on arctic morass or shifting desert sand. Mighty as are all our mechanized fighting units, they become helpless juggernauts the moment their gas tanks are dry of gasoline and oil.

So it is that Butler factories match the stride of the makers of aircraft and

mobile fighting units. Until the last gun is fired to end global war they will continue to produce some of the most vital equipment of modern warfare. (See composite picture above.)

Even before that last gun is fired, however, Butler engineers hope to plan with you on Butler Built steel products for your peacetime needs.

**BUTLER MFG. COMPANY**  
KANSAS CITY, MO.  
GALESBURG, ILL. MINNEAPOLIS, MINN.  
Sales Offices — Washington, New York, Chicago,  
Atlanta and Shreveport.  
Export Office — 8 So. Michigan, Chicago

Awarded To Our  
Kansas City Plant  
For Excellence  
in War Production



Producing  
For War—  
Planning  
For Peace

# BUTLER BUILT

## STEEL PRODUCTS

STEEL BUILDINGS...TANKS (Storage, Processing and Transport)...FILTERS  
STILLS...DRY CLEANING EQUIPMENT...RURAL GAS SYSTEMS...SEPTIC TANKS  
GRAIN BINS...FARM EQUIPMENT and PRODUCTS OF OTHER METALS

# 31<sup>ST</sup> Annual Meeting

OF THE  
CHAMBER OF COMMERCE  
OF THE UNITED STATES

Waldorf-Astoria Hotel  
New York City

April 28 - 29 - 30

★ Business and industrial leaders, representing every field, will discuss America's war problems—will chart a course of action: (1.) To increase production to the maximum to bring about quick and complete victory; (2.) To produce sound economic conditions and jobs when peace comes.

cigarettes. I had a flashlight with a red bulb and, when I turned it on, a Jap sniper sent a bullet past my ear. The password that day happened to be "Sparkle" and that's the way my legs went getting out of there. The sniper fired another bullet but I outran that one while a Marine knocked the Jap out of his tree.

Incidentally, the Japs aren't good rifle shots or very accurate bombers. But their artillery is good and they are tough fighters who are not going to be easily licked. They never seem to quit fighting.

There was one Sunday—they never missed a Sunday—air raid when American Grumman fighters and anti-aircraft got 23 bombers and ten Zeros. We lost two planes, no pilots. I saw one American pilot get a Zero just before another Zero got him.

### A bad disposition

THE JAP pilot bailed out, which was unusual, and he and the American came down in their parachutes almost together. One of the boats, which were always on duty in air raids to pick up pilots who fell in the water, pulled in the American and then went after the Jap.

As they came up he tried to shoot Lieutenant Conger who was waiting to pull him aboard. The pistol missed fire. Then he tried to commit suicide but the gun missed fire again. He threw it away and dove into the propeller, but the coxswain cut the motor switch.

Finally a big sailor snagged him aboard with a boat hook. He kept right on fighting until somebody bashed him in the head with a bucket and somebody else prodded him in the stomach with a pike pole.

At that, the Japs are no tougher than the Americans. If the folks at home will give them what they need, they'll use it clear to the last ditch and none of them will feel that he's done enough as long as he's able to do more. If it wasn't for that, men who are alive today would have died on Guadalcanal.

The south of the island is level but the north is mountainous, with deep ravines. There wasn't a chance to get men wounded in those ravines back through the jungle to the dressing stations. Instead they were carried to the beaches and boat crews that had manhandled cargo all day went in at night under fire and brought them out.

When you've seen enough of that, you can't understand anybody shirking anywhere, or laying off until the job is done.

On Guadalcanal a force of Marines was landed, one dawn, in Japanese territory. They fought all day, but two hours before sunset they were outnumbered and almost surrounded. Ten landing boats went in to bring them off.

Coast Guardsman Douglas Monroe helped cover the evacuation with a machine gun. Just as the boats were leaving, he was hit.

As the boats sailed back to the base he roused himself in one last moment of consciousness.

"Did we get them off?" he asked.

They had, including dead and wounded, because men like him were never too tired or underpaid or too sick to do the job that needed doing.



# GREATER SAFETY



## ... for Our Boys

### Mechanical marvels protect their lives

It is reassuring for us at home to realize that our boys in the Army, Navy, Marine Corps, and Coast Guard are safeguarded by superb defensive weapons, into which the greatest degree of protection has been built by America's engineering genius and production skill.

When our bombers take to the air—whether to rain destruction on vital enemy

bases, or to support ground-force attacks—the odds are heavily in their favor. These bombers are made safer for their crews and give greater protection to all of our forces involved in the engagement, because they are protected by power-operated revolving gun turrets, one of the war products made by Emerson-Electric.

More than 53 years' experience in precision workmanship, building millions of high-quality electric fans, motors for appliances and equipment, and welders for industry, was quickly converted by Emerson-Electric to the manufacture of gun turrets and other war equipment. The

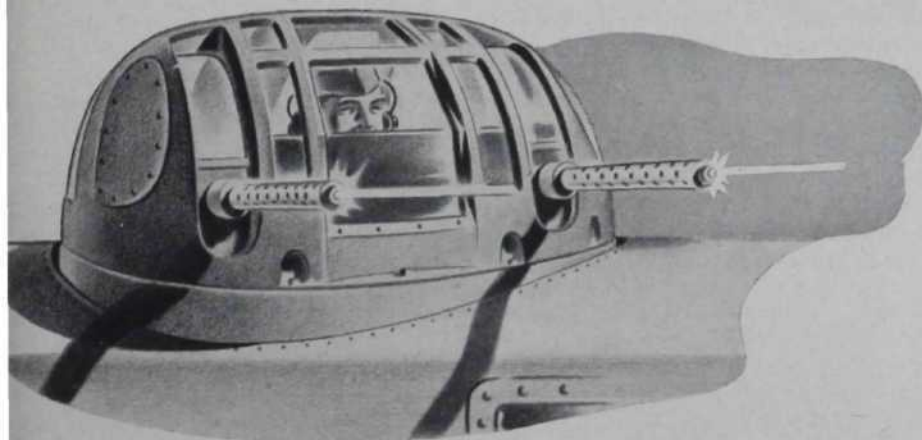
same all-out dependability which has made these fans, motors and welders so outstanding now contributes to the safety of our armed forces.

*Now, everything Emerson-Electric makes is for the military and naval needs of the United Nations.*

THE EMERSON ELECTRIC MANUFACTURING CO.,  
SAINT LOUIS... Branches: New York • Detroit  
Chicago • Los Angeles • Davenport



For building these Power-Operated Revolving Gun Turrets and other war products, Emerson-Electric workers were presented with the Army-Navy "E" Award—in recognition of their "patriotism and great work..."



### How Emerson-Electric Power-Operated Revolving Gun Turrets Work

These turrets might be called "built-in fighter escorts" because they protect the plane and the members of its crew while they are engaged in offensive missions. The gunners inside the turrets (a single bomber has a number

of power-operated turrets) are well protected while they "dish it out" to enemy aircraft. In a split-second they can swing into position and cover the point of attack with a continuous burst of fire power from heavy-caliber guns.



### "After Victory"

#### A NEW ELECTRICAL WORLD

"After Victory" the added experience gained in war production will be devoted to the development of fans, motors and welders for the new electrical age in the better world we are fighting to establish.

# EMERSON ELECTRIC

MOTORS • FANS • APPLIANCES • A. C. ARC WELDERS





## the **MAGIC WAND** of Modern Business

To do things differently—better, faster, at lower cost—a business must first of all have ideas. Many organizations seek this magic wand in idea-boxes—trusting to luck that solutions to their problems will find their way into them. But users of the Morton Method have found the best way to insure progress and build for the future.

For the Morton Method is not merely a system for *collecting* suggestions. The Morton Method is a means whereby ideas can be—and are—*created*, through proper stimulation of the entire working force in any business. The men and women who are close to the details can frequently see short-cuts that management may overlook. In the past 15 years, more than 9,000 different establishments have used the Morton Method, until today the money value of ideas thus made available totals far into the millions.

Other, intangible but highly important, results are obtained also by the Morton Method. Chief among these is improved morale.

You will want to know all about this tremendously useful way of solving present problems and producing material for future planning. Forward-looking executives can secure complete details, without obligation, by writing today.



**MORTON MANUFACTURING CO.**  
**SUGGESTION SYSTEM DIVISION**  
329 N. LEAMINGTON AVENUE • CHICAGO, ILLINOIS

Please send full information about the Morton Suggestion System. It is understood this request places us under no obligation. We have about \_\_\_\_\_ employees.

Company Name \_\_\_\_\_

Address \_\_\_\_\_

Individual \_\_\_\_\_

# We Tour the HOME FRONT

An 80-page book, "Conservation of Construction Equipment and Facilities," has been published by the Associated General Contractors of America to aid the war effort by conserving critical materials and maintaining equipment, now impossible to replace, in usable condition.

An all-girl department is now assembled at Shipley Machine Tool Co., adjusting and testing small lathes.

By producing 14 tons of intricate communications equipment for the U. S. Army Signal Corps in 26 days instead of the 26 weeks normally required for such a task, the Western Electric Co. played a major part in establishing communications for the new Alaska-Canada Army Highway.

Photographs made with a "fisheye" camera, developed by General Electric, which show everything in a room above its level, enable engineers to solve quickly problems of illumination which would otherwise require long and elaborate calculations.

The Federal Shipbuilding and Dry Dock Company has set up a new-type shipyard F.B.I. in their Kearny and Port Newark yards. In classes of 25, eight hours a day, six days a week, they teach what to do if the bombers come; or if the enemy tries to strike at shipping at its shipyard source, through sabotage and arson.

Aluminum Foundry Division of the Willard Storage Battery Co. recently delivered the first heat-treated aluminum aircraft casting to North American Aviation Co.

New war workers, many of them soldiers' wives and most of them from non-essential occupations, are being trained at the rate of 500 a month to meet expansions in Pullman-Standard Car Mfg. Company's aircraft division. Output will amount to 14 times original orders.

A metal replacement container adopted for carrot juice cocktails is being manufactured by P. D. Redenour Sales Co. They found that, by dehydration, they could pack enough cocktail powder (a special mix containing celery and salt as well as carrots) into a small vest-pocket size cellophane envelope to make a quart and a half of cocktail.

The B. F. Goodrich Co. has announced the manufacture of a revolutionary type

of airplane tire laced with steel coils to resist skidding on icy airport runways and in Arctic and sub-Arctic regions.

A million miles a day are being flown in Cessna bomber-pilot training planes at U. S. Army and Royal Canadian Air Force flying fields.

A United States cargo vessel was torpedoed in West Indies waters. After she had been afire and listing heavily for approximately 40 hours, two of the ship's eight-cylinder Diesel engines, supplied by The Cooper-Bessemer Corp. of Mt. Vernon, Ohio, and Grove City, Pa., were found to be operating perfectly.

The Lycoming Division of The Aviation Corporation recently announced the latest addition to a long line of precision-built aircraft engines—a new Lycoming flat, geared engine identified as GO-435. It is a six-cylinder, horizontally opposed engine of 210 horsepower with propeller reduction gearing, uses 73 octane fuel, incorporates a planetary type reduction gearing.

An order for 66 miles of conveyor belt has been awarded to the B. F. Goodrich Company.

More than 55,000 employees of U. S. Steel Corp. and subsidiary companies, the equivalent of nearly four full Army divisions, are serving in the military forces of the United Nations.

The opening of a new radiotelegraph circuit between the United States and Algiers, North Africa—the first and only direct circuit of its kind—has been announced by Admiral Luke McNamee, President of the Mackay Radio and Telegraph Co.

Wood has become a heavy construction material through development of a special chemical pressure treatment which makes it resistant to fire, decay and termites and gives it the strength of mild steel, according to the American Lumber & Treating Company.

The Association of American Railroads reports that more than 8,000 miles of railroad track were built in 1942.

In the production of silverplated bearings for airplane motors, the rate of plating is more than trebled by use of potassium cyanide, formerly imported from Europe but now made in this country by the Electrochemicals Department of E. I. du Pont.





## The Case of the Horrified Hostess

(Case No. 1-B-3580 from U. S. F. & G. files)

**HORRIFIED?** What hostess wouldn't be, if she discovered her guests' handbags had been stolen . . . if faced by the loss of her guests' belongings? Because Mr. and Mrs. \_\_\_\_\_ of Brooklyn, N. Y., carried burglary insurance with the U. S. F. & G., their guests' losses were made good. With burglary insurance so low in cost, can you afford to go on trusting to luck?

On this page are other cases from the U. S. F. & G. files which illustrate today's war-increased hazards. Read them over, then ask yourself this im-

portant question: "Could any of these things happen to me?"

To help you avoid financial jolts, your local U. S. F. & G. agent places at your disposal *knowledge* of insurance—plus on-the-spot service in the payment of losses. He will be glad to make a Graphic Audit of your insurance—to help you guard against wartime risks which make such an audit imperative. Your U. S. F. & G. agent is one of thousands serving communities throughout the United States, its possessions, and Canada. Consult him today.

*Consult your Insurance Agent or Broker as you would your Doctor or Lawyer*

# U.S.F.&G.

UNITED STATES FIDELITY & GUARANTY CO.

affiliate:

FIDELITY & GUARANTY FIRE CORPORATION

HOME OFFICES:



BALTIMORE, MD.

*— Could  
any of these things  
happen to you?*



(Case No. 21-G-1332)

### Customer breaks glass door

The sale was a success . . . so much so that a determined woman customer, eager to enter, kicked the jammed door and shattered the costly plate glass. Today plate glass is expensive, hard to get. If your business requires plate glass windows, door or show cases, they should be amply insured.



(Case No. 161098)

### Purloined platinum parts

Naturally, the electrical supply company trusted him . . . he'd been a stock clerk for 17 years. But when platinum parts began to disappear, they found he'd stolen and sold \$23,511.57 worth of supplies. Under a fidelity policy, U.S.F.&G. settled the claim. Is your company adequately protected against employee dishonesty?



(Case No. 4-L-805)

### Jitter-bug Jeopardy

Jitter-bugging was no joke to the man who was knocked down while dancing. Nor was it a joke to the restaurant proprietor, faced with a \$1500 suit. But a public liability policy with U.S. F.&G., saved the proprietor loss and trouble, compensated the claimant for his injuries. What if someone were injured in your home or place of business?





"Big Inch" climbs a hill and swims a stream to bring crude oil from Texas to the East Coast refineries

# The "World Series" for Pipeline Builders

By PAUL McCREA

**W**HEN Denver S. Patton of the Texas Company heard that W. Alton Jones was projecting a 24-inch pipeline from Longview, Texas, to the eastern seaboard, he told a friend:

"Tell Jones that I want to work on that line even if I am put to carrying water. This is the World's Series of pipelining and I want to be in the line-up."

Other oil men felt the same way. They began to rally round Mr. Jones who, as president of War Emergency Pipelines, Inc., extended a ready welcome. Peace-time President of Cities Service Company, Mr. Jones was already engaged in a variety of activities designed to nullify Nazi submarine raids on our tanker fleet. But when Petroleum Administrator for War Harold Ickes decided to order the

oil industry to build the granddaddy of all pipelines, with the Government meeting the bill, Mr. Jones added another title, several new duties, and went to work.

First pipe was shipped July 17, 1942. Construction started Aug. 3. Two hundred days later, Mr. Jones personally valved the first oil to squirt from the new line into tank cars at Norris City, Ill.

Having been exposed to some of the enthusiasm which Mr. Jones and other oil men felt for this project, we undertook some casual research into pipelines generally and this one in particular. Herewith is our report.

The Burmese probably built the first pipeline. Those people had the earliest oil industry, producing petroleum from shallow holes in the



W. Alton Jones valves the first oil into tank cars at Norris City, Ill.

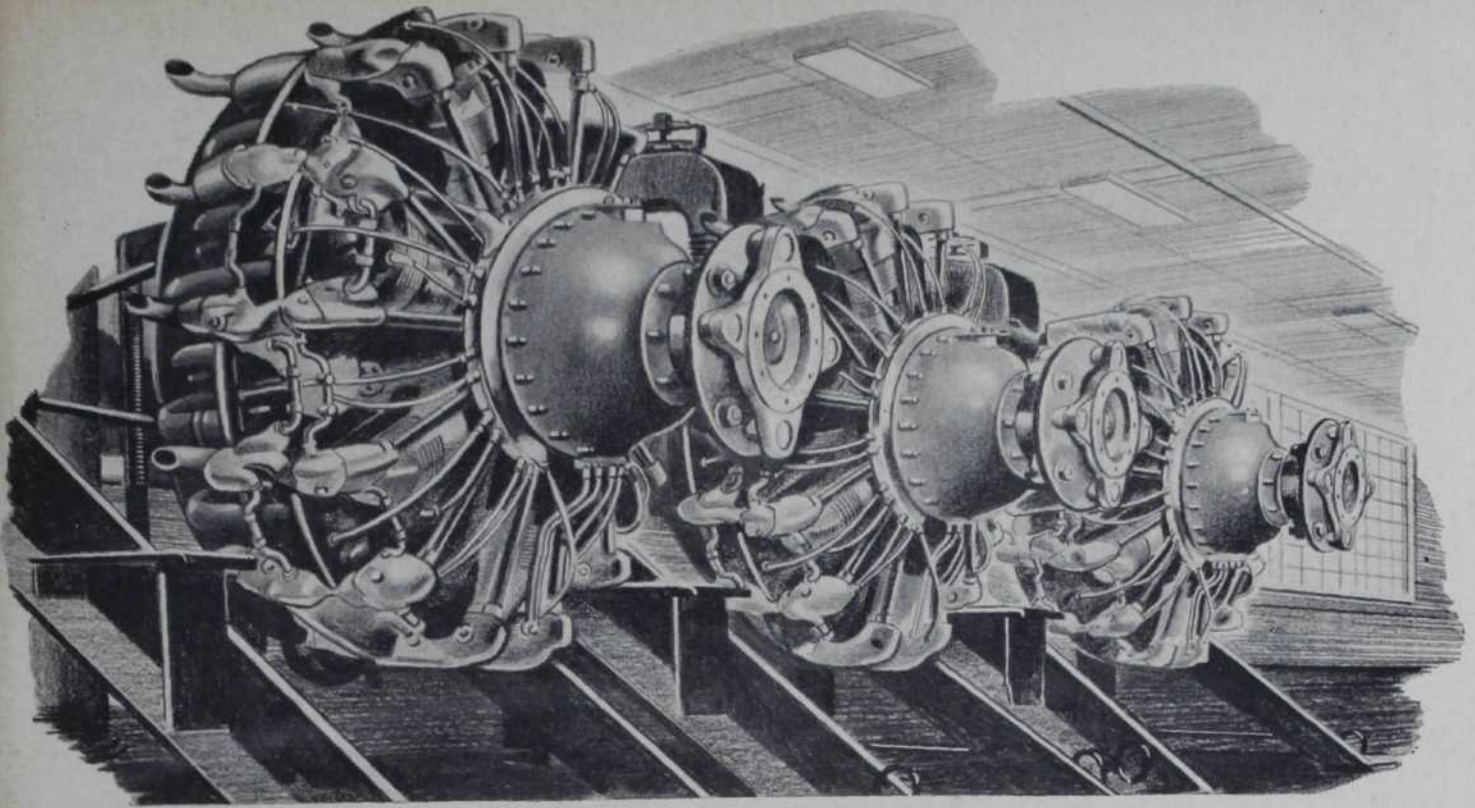
ground and transporting it here and there in hollow bamboo. They were exporting petroleum before our Civil War.

The first pipeline in this country carried natural gas to the town of Fredonia, N. Y., through hollow logs. The first to carry petroleum products started at Pithole, Pa., and dribbled oil some five miles through two inch pipe except when teamsters—who resented its competition as an oil carrying medium—tore it up.

These primitive tubings had little in common with "Big Inch" which is the name oil men have tagged on this new monster, as they tag it on any kind of big pipe, however used.

Except for a couple of stretches of 92 and 45 miles, "Big Inch" uses 24 inch seamless steel pipe with the joints welded together. That is the biggest pipe ever used for petroleum although some 26 inch pipe has been used for natural gas. Most petroleum pipelines range from two to 20 inch





## THOUSANDS OF 'EM "WEANED" ON AIR OF THE SAME TEMPERATURE!



RADIAL COMPRESSOR

Sealed in test cells, all new aircraft engines are "weaned" on air of the same constant temperature. And in this test, which assures identical performance for each engine, Chrysler Airtemp Radial Compressors play a vital role in holding temperatures right "on the beam" for aircraft manufacturers.

Throughout the aviation industry, Chrysler Airtemp temperature and humidity control is being used to get fine precision, provide dust-free assembly rooms, as well as prevent rust and corrosion of raw and finished parts.

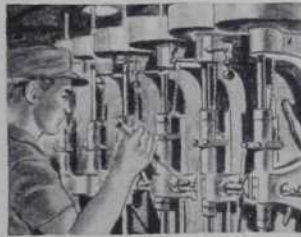
Chrysler Airtemp is war engineering its time-tested temperature and humidity control equipment to meet the requirements of countless other war industries. Many of them are described in a new booklet, CHRYSLER AIRTEMP AT WAR. Write for your copy today.



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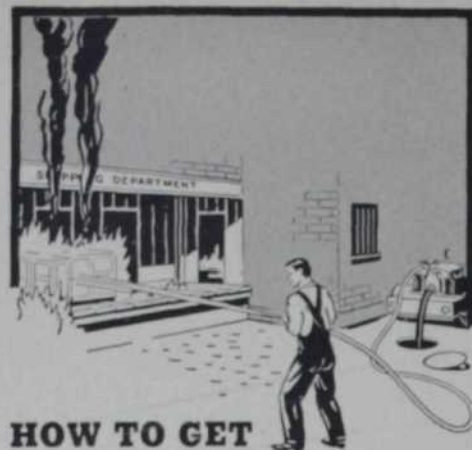
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## HOW TO GET

### THE "JUMP" ON Plant Fires

Very often, plant fires start in locations accessible only to mobile fire fighting equipment. That's when reliance on inadequate protection measures can get you into a tight spot.

Designed to enable you to get the "jump" on such fires, LaBour Portable Fire Pumps provide positive fire protection wherever it's needed. Construction and operation of these LaBour units is simplicity itself. They're always ready for instant action—even inexperienced fire fighters can operate a LaBour effectively.

Get all the facts on this inexpensive way to ever-dependable fire protection. Write today for prices and details.

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## SMOKING TOO MUCH?

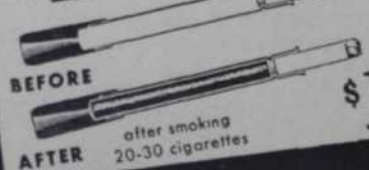
Get a **ZEUS**

**Filter CIGARETTE HOLDER**

Eliminates major part of nicotine and tars—by official laboratory test

\*Reg. U. S. Pat. Off.

USE ANY CIGARETTE IN HOLDER AS FILTER



**"SMOKE ALL YOU LIKE" —like all you smoke**  
AT ALL GOOD STORES L & H Stern, Inc., B'klyn, N. Y.

diameter (20 is used on the non-conforming stretches of "Big Inch").

The use of big pipe gave engineers several interesting problems, most of them having to do with the pumps supplying pressure to keep the oil moving, which it does at the rate of about six feet a second or 100 miles a day. The pumping stations are from 35 to 65 miles apart, depending on the kind of territory the line happens to be crossing. The pumps are of all kinds, although preference seems to be for plunger types. Mostly they are powered by Diesel engines. They develop pressures up to 600 pounds for moving crude, which is what "Big Inch" will carry in most part although some fuel oil may be moved.

The part now completed is 731 miles long. It had to be filled before it could start delivering oil. That took five days and 1,500,000 forty-two gallon barrels of oil. When it is finally completed to the refinery districts at Philadelphia and Bayonne, N. J., it will be 857 miles longer, hold 3,800,000 barrels of oil. Crude will need about 14 days to travel from Texas to the eastern terminus. About 300,000 barrels will pour out every day.

From its present terminus at Norris City, the line is sending some 125,000



Biggest pipe ever used to move petroleum. Bigger has been used for gas

barrels to the East. Some complicated mathematics go into that. The line itself will deliver as much oil in Illinois as it finally will in the East but tank cars that complete the trip cannot handle its full capacity. Moving 300,000 barrels a day would require some 25,000 cars.

The line was built in sections. Different contractors each took a chunk and all started working at once, depending on engineers to see that the various parts actually met when they came together. They did. So far as possible the line is straight since curves increase resistance and make additional pressure necessary. Sometimes curves are better than hills, however,

## HOW TO MAKE CUSTOMERS BEAT A PATH TO YOUR STORE

- Plan to remodel with a new Pittco Store Front either now, if you can comply with federal regulations, or later, when building restrictions are lifted. Write us for free book and complete information. Pittsburgh Plate Glass Co., 2237-3 Grant Building, Pittsburgh, Pa.

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*store fronts*

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"PITTSBURGH" stands for Quality Glass and Paint

## For rapid gaging of INSIDE DIMENSIONS with split-thousandth accuracy



**THE TRICO MICRO-CHEK** is now in use in more than 2250 war plants to speed up nearly all types of precision gaging. Multiplies dimensions by 200—reducing eyestrain and fatigue.

The new Caliper Type facilitates rapid gaging of internal dimensions, regardless of shape—from 3/16" to 2-1/2"—by means of expanding caliper fingers. Set up ready for use. Applicable to practically any recessed gaging need—replacing plug gages. Adjustable against wear.

**TRICO**

Write for illustrated booklet showing many applications of Micro-Cheks.

TRICO PRODUCTS CORP.  
140 Trico Building  
Buffalo, N. Y.



and sometimes it is necessary to bend to miss rocky ground which would require expensive ditching. Highest climb for "Big Inch" will be 2,900 feet near Laurel Hill, Pa.

When complete, the whole line will be underground at least "below plow depth," a phrase incorporated into contracts with farmers who sell right of way across their farms.

Right of way for a pipeline is bought like any other kind of right of way and the Cole bill, passed in 1941, makes condemnation possible if necessary. After the pipe is down, it needs continuous inspection against leaks, or thieves who sometimes find it convenient to tap the pipe, collect a few drums of oil and then go away, leaving a small geyser squirting from the hole.

### Hunting leaks by plane

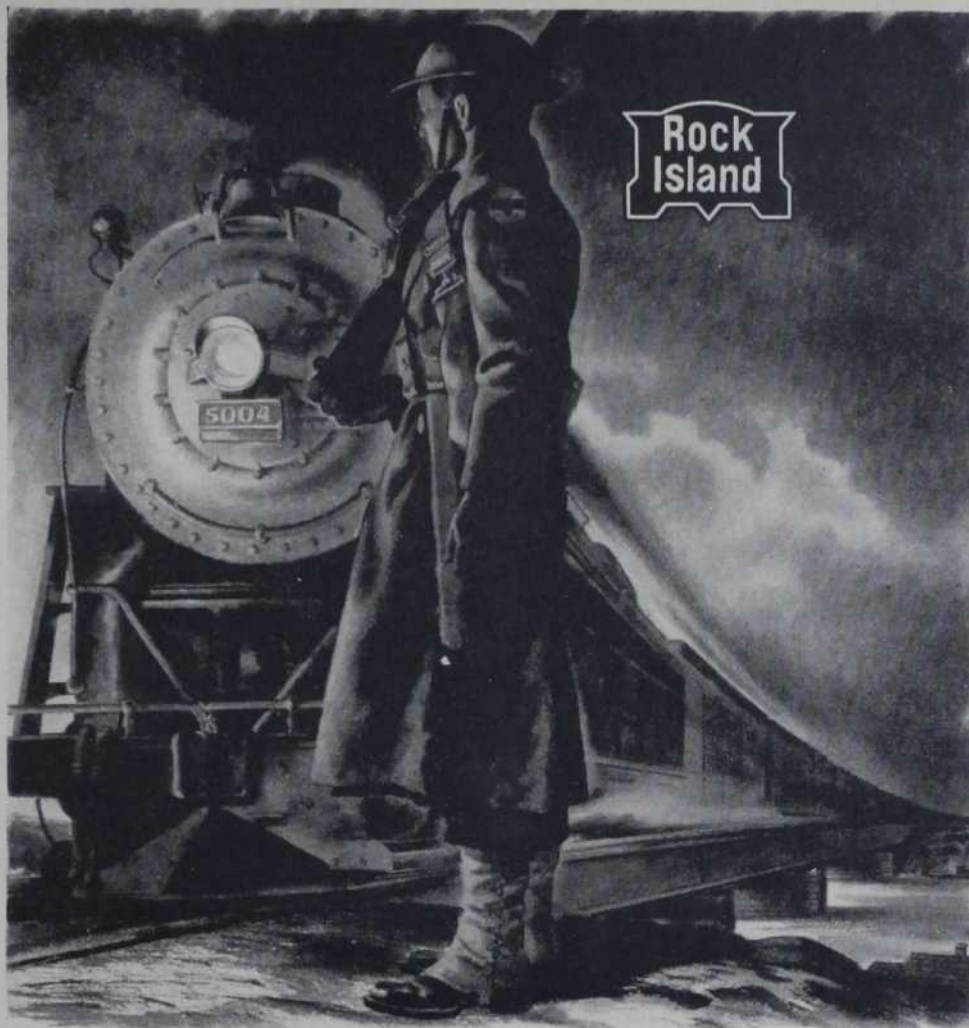
IN the old days, line walkers covered every foot of the line every day looking for such things. Now gauges in the pumping stations warn of leaks by recording lowered pressures. Most lines still use walkers, too, although at least one has turned to inspection by airplane. Experienced observers, flying over the line, spot breaks by discoloration of the ground.

Although it is possible to move different products through the same line by a technique known as "batching through," "Big Inch" probably will carry only crude oil East because crude does not team up well with other things, gasoline, especially. Gasoline and kerosene may share the same pipe without contamination. Gasoline is shoved through for a while and then a batch of kerosene run in behind it. One pipeline in the West has handled as many as seven products by that system.

When a line is filled up and oil starts moving the first thing to come out is frequently rabbits. Small animals with investigative minds explore the line as it is building and are trapped there to their disadvantage.

The last thing that ever goes through a line is water, pumped through to force out the oil that would otherwise remain in the pipe when the line is dismantled. Periodically, meanwhile, a scraper goes through. Dropped in at a pumping station this device moves with the oil, its blades, rotated by the liquid, cleaning paraffin and other sediment from the pipe.

"Big Inch" was built with R.F.C. funds by War Emergency Pipeline, Inc., a combination of 11 oil companies which will operate it for the Defense Plant Corporation, the owner. Total cost will be about \$95,000,000. The D.P.C. has said that it wants to turn it over to private ownership after the war.



## Victory speeds out of the night

To lonely watchers it may seem just another train speeding through the night.

*Just another train?* Hardly! Today there's no such thing on the ROCK ISLAND LINES right-of-way. For our trains haul the products essential to victory; carry, too, the men who fight so that some day the nations of the world may be at peace.

This has been our job ever since the call "To Arms!" was sounded—and will be our job until America's foes are vanquished.

Battles are still to be fought—battles on the transportation front no less than battles on some far-distant alien shore.

But courage and resourcefulness were ever American traits. They help our fighting forces to overcome the enemy, just as they help the railroads to do the seemingly impossible in transporting vital man power and the equally vital materials of war. And of great help, too, is the splendid cooperation of patrons.

That train speeding through the night is a harbinger of the peace that is to come. Whether or not it carries the ROCK ISLAND symbol means little—all of America's railroads are united in this war-to-the-finish. We of the ROCK ISLAND are happy that we are privileged to have a part.

*Victory will speed out of the night . . . into a dawn of peace.*



**ROCK ISLAND LINES**  
KEEP BUYING WAR BONDS



# Civilian Goods in War-Time

By CHARLES H. KALETZKI



Smaller merchants are being told their stocks cannot be restored—their supplier has been converted or curtailed

**W**ITH our reserve stocks of consumer goods well-nigh depleted, and our distributive system periled as a result, the time has come to initiate a drive to protect our civilian economy by resuming some production of consumer goods. Without that, the successful financing of a global war will be impossible.

Now, after 15 months of experience in actual war, the scope of military operations is becoming plain and we can see more clearly the dangers that lie ahead. It is now time for government to encourage consumer goods production if:

1. **The fundamental needs** of American families are to be met even on a curtailed standard of living.
2. **The distributive system** which has been the basis for the creation of American wealth is not to be destroyed, thus opening the way for another system detrimental to American business.
3. **The life of small American communities**, which are the very essence

of America, is to be maintained.

4. **The opportunity** for the obscure individual to rise is to be held as a promise to succeeding generations.

It is essential that government make it the responsibility of some substantial agency to bring these things about.

A year ago, a high Treasury official was told:

"If we destroy our distributive system, we destroy our wealth-producing facilities, on which you must depend for taxes—and for the sale of bonds."

His answer was:

"This is all out war. Some are going to become wealthy, perhaps. Many more probably will lose. What of it? Hundreds of thousands of lives may be lost. No one knows whose lives. So it must be with business. Let the chips fall where they may. Those who cannot withstand the pressure will have to go."

Apparently such foundation thinking in high places in government was the background for curtailment.

**THE public wants consumer goods. The Government wants money. If consumer goods production dries up, there will be little left to pay taxes**

"The people of England have proven they could do without. We in America can do without, too."

But time has shown that England—her consumer goods production virtually stopped—her wealth-producing facilities thus shrunk—had to be rescued by the Lease-Lend Act. Who can lease-lend to us?

The English pattern apparently was the basis of the government demand that people stop buying to invest in War Bonds and Stamps. It was unpatriotic to buy anything more than barest essentials. Indulging in luxury was traitorous.

In spite of the propaganda against buying, our retail stores in 1942 had the greatest dollar volume in history. It was greater than the fantastic totals of 1929. Figures for 1942 submitted by only 30 chain store organizations showed a sales increase of 11.4 per cent—with a total volume of \$4,877,118,361.

To do that volume it was necessary to dip deep into the reservoir of commodities which had been built up in the preceding years. Today the shelves of many stores are becoming bare. The smaller merchants are being told their stocks cannot be restored until after the war.

## Pennies at work

**YET** it is important that the men and women who are in war work and earning money never before dreamed of, should be able to get something—no matter what—besides an accumulation of greenbacks as pay for their work.

Every dollar spent for merchandise is divided into many parts. Perhaps less than 25 per cent represents the basic cost of manufacture. Several enterprisers and many hands might share even in that portion. Another portion goes to selling through the distributor, jobber, wholesaler, and retailer, on its way to the consumer.

At each step, the few pennies taken





## Night Over the North Sea

Like a hard-hitting pugilist, softening his opponent with repeated body blows, the planes that fly over the North Sea by night are softening the Axis by increasingly heavier blows at its vitals. Every bombing of such centers as Berlin, Hamburg or Essen makes it more difficult for the Nazis to maintain their armed forces at many scattered fronts. In good time these bombings will destroy the enemy's power to resist; and then the road to Victory will be short.

This end comes nearer as more and always more American planes join those bombing attacks; planes that the Axis cannot match in ability to make long flights with heavy bomb loads, drop those bombs with maximum destruction and fight their way home with surprisingly few losses.

No small part in the superiority of today's American planes is being played by tough, drop forged parts, several hundred of which are used in a single bomber. At Kropp Forge, we rejoice in the volume of forgings which we are turning out for wing, strut, fuselage, engine, landing gear, linkage mechanism and bomb release parts; rugged, stress resistant parts always delivered on time.

To plane and engine builders, whose inquiries we solicit, we offer all the advantages of specialization—a great modern plant devoted exclusively to the production of drop forgings for aircraft.



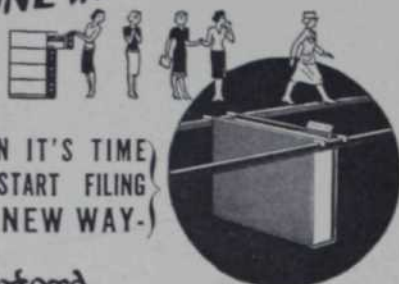
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These days of multiple forms, extra copies, priority extensions, pile up office paper-work like never before! In drafting rooms, too, more and more tracings, blueprints, specifications, shop instructions are needed—*rush*. Take the burden off your clerks and draftsmen—eliminate bottlenecks and hours of wasted time with this amazing new copying method.

Hunter Electro-Copyist makes perfect duplications of anything drawn, printed, typed or photographed, in a fraction of customary time! And it's easy to use—has no dark-room, needs no lenses or focussing—so simple anyone can work it—*fast*! Write us today for our new folder telling how you can jump production—save time and labor with Hunter Electro-Copyist!

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493 S. Warren St., Syracuse, N. Y.

## A Second Front — Here at Home!

Here is a seven point program intended to clarify the position of American business during war and to stimulate the further development of the nation for the business that must come with the Peace.

1. **Call into a meeting** in Washington the trade associations representing all wholesale and retail outlets. Send a message of encouragement to all merchants. Break down the fear of governmental bureaucracies. Establish the patriotic necessity to carry on some business despite restrictions.
2. **Tell all manufacturers** of consumer goods they must fight to stay in business. Replace "Thou shalt nots" with word to go ahead. Establish understanding of the need for some production despite restrictions.
3. **Make an immediate survey** of all basic materials, hitherto preempted for military purposes, which now may be reallocated in some small portion to consumer goods production.
4. **Give official recognition** to creators of new methods using available basic materials in producing consumer goods.
5. **Call upon all science sources** to encourage the development of new substances.
6. **Bring about necessary cooperation** between government departments in order that essential machinery for the production of consumer goods may be procured through the granting of priorities.
7. **Seek to maintain public morale** through the gratification of the human desire to acquire goods in exchange for labor through the medium of wages.

from the consumer dollar accumulate with the volume of sales. They support American institutions, provide the funds for the payment of rent and taxes; send children to schools and colleges, maintain the common social services; permit contributions to the Red Cross, the Community Chest, the churches, and all the other things bound up with our way of life.

Remove merchandise from our stores, and there is no need for the merchant to advertise in his local newspaper. But the small town press in America is vital to the maintenance of morale because a free press, the one sure means of keeping the people thinking the right way, can be maintained only through advertising. The newspaper publisher is not paid by public funds. He is paid by the business he operates—the business of printing the advertising of his local merchants. Publication of our 12,000 or more daily and weekly newspapers

can continue only so long as stores have merchandise to sell.

Probably 90 per cent of the merchandise needed for mercantile establishments is produced in factories that are actually the "small business" of this country.

It is perhaps inherent in the philosophy of American business that only those who consider themselves the victims of monopolistic pressure are regarded as "Small Business." Concerns able to function freely or without domination of so called "Big Business" are somewhat reluctant to think of themselves as "Small Business."

Yet in reality all American business is "Small Business," except that which is specifically under the control of corporations so large in their capital structure, or in their operating affiliations, as to dominate the market in which they operate.

We should stop thinking of "Small



# TWO CRITICAL WAR MATERIALS

*...and how to conserve them*



● The two eyes of each of the *thirty-seven million* American workers are an irreplaceable war resource—one that must not be wasted or abused.

For modern war production, with its accent on close tolerances, demands faultless, unflagging vision.

And now, as America works faster, longer, harder, than ever before—eyes are under an increasingly heavy strain.

No wonder, then, that to preserve precious eyesight, more and more war plants are seeking not just good lighting, but the very best lighting at their command—cool, glare-free, shadowless *fluorescent*.

Ever since the first commercial and industrial use of fluorescent lighting, Sylvania's leadership has been based on its progressive technical developments—in scores of such factors as cathode construction, gas pressure control, precise mercury measurement (the "Mercury Bomb"), blending and applying fluorescent powders, etc. These continuous advances have produced Sylvania Lamps which today deliver these results:

They give more light, more lumens per watt; they are longer-lived; they have a more uniform coloring; they have a finer, smoother coating.

Most important, these lamps give you more than twice the illumination you get from incandescent lamps—for the *same wattage!* It's possible to double your illumination on your existing wiring circuits.

Sylvania Lamps work well in any type of fixture. Of course, they're at their best in a complete Sylvania "package" in which lamp, fixture and accessories operate as an harmonious unit.

Priority ratings for these complete fluorescent systems can be obtained wherever it can be shown that better lighting would speed essential war production. Our representative will gladly assist you in filling out the necessary forms. A line will bring him to you.

## SYLVANIA

ELECTRIC PRODUCTS INC.

*Formerly Hygrade Sylvania Corporation  
Salem, Mass.*

*Incandescent Lamps, Fluorescent Lamps, Fixtures and Accessories, Radio Tubes, Electronic Devices.*



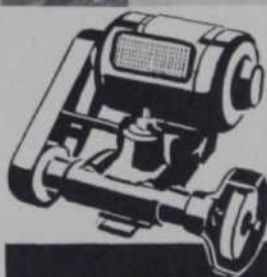
**Miralume Fixture HZ-100P with composition reflector.** There is a complete line of Sylvania Fluorescent Fixtures available to fit any industrial need. From the standpoints of economy in use of critical materials, color and quantity of light, and light distribution, these fixtures provide the last word in fluorescent lighting efficiency. They are obtainable, on priority, by plants engaged in war work—upon proof of genuine need for better lighting.



# How thick is this page of NATION'S BUSINESS?

The paper on which this is printed is 30 times as thick as the measure of accuracy attainable with Dumore Precision grinders...1/10,000 of an inch! In finishing operations...external...or internal to a depth of 24 inches...Dumore's close control to minute tolerances helps war workers to produce precision parts and dies in less time and with less waste of critical materials. The flexibility of Dumore Grinders further emphasizes their speed and economy. They can be quickly mounted on lathes, planers, shapers, millers and other machine tools...to convert new equipment to multiple uses and modernize old machines. Dumore products are sold and serviced exclusively by better mill supply distributors everywhere.

**THE DUMORE CO., Dept. 503-D Racine, Wis.**  
Manufacturers of Precision Grinders, Electrical Tools and Fractional Horsepower Motors



Grinding the main bearing liner of an aircraft motor with a Dumore No. 7 Precision Grinder at the United Airlines maintenance base.

## Dumore PRECISION GRINDERS



# BUY UNITED STATES WAR BONDS AND STAMPS

Business" as the small "Papa and Mama" grocery store; the family-run repair shop; the village grist mill or the small town general store. The man in an upper bracket of earnings may not like to be thought of as a "Little Man"—but on a nation-wide evaluation of his business stature, he might not be entirely at home in the company of General Motors, U. S. Steel, DuPont, or our communication and transportation giants. Concerns whose volume runs into millions could well be "Small Business" in the American scheme.

### "Forgotten" Retailers

THERE has been a great cry that the so-called "big" companies have received the contracts for war material at the expense of the smaller. Early adherence to that method largely was responsible for the rapid development of the production facilities which have given us an offensive advantage. The smaller plants now are getting a larger share of the business. Few industries which could be converted have not been so converted. The business is being spread. Production of war material is well in hand. Large and small industries will continue to produce heroically for the military.

Now, then, is the time to say to American business:

"Let's rebuild the fences of our civilian economy."

The merchants of the country feel that they are "the forgotten men"—parasites on society in the eyes of official Washington. Change that attitude and the man behind the counter will swell with pride because he, too, then is a fighting man alongside his son off somewhere in Africa.

Recent testimony by representatives of wholesale and retail associations has clearly indicated that government agencies have avoided consultation with such associations. Rather have they chosen other sources of information not nearly so likely to be well informed. These trade associations are respected in their fields. Their officials can well bespeak the support of their members for any program intended for the common benefit.

Eliminate the stigma of "saboteur" from the factory that cannot be converted. Make it work—out in the open—to preserve the civilian economy.

Government cannot ignore the creator of anything new in these times because we need new things to replace

### SAVE BARN ROOM

If 3 big strong cows produce as much milk as 5 small producers, you have two extra stalls for more cows. Big strong Holstein cows give maximum use of all facilities. Write Box 2143.



**HOLSTEIN-FRIESIAN ASSOCIATION**  
BRATTLEBORO, VERMONT





**Keep your eye  
on this lad  
Mr. Manufacturer**

A FEW MONTHS AGO he was just a normal, untrained, happy-go-lucky kid. Today he's been well trained by Uncle Sam's Signal Corps into a competent technician, fit to take the responsibility on which hundreds, maybe thousands of lives depend. When he comes marching up Broadway in a shower of ticker tape, be ready to grab him—he'll be a valuable man.

And if tells you that communications and electrical equipment made here at C. T. & E. is the last word in advanced engineering and rugged dependability, pay heed—you'll be listening to the voice of experience. You see, there's "Connecticut" equipment on the job almost everywhere United Nations forces are fighting. We are glad to let our reputation stand on its performance.

**CONNECTICUT TELEPHONE  
& ELECTRIC DIVISION**



MERIDEN, CONNECTICUT



what has necessarily been eliminated. Tell the manufacturers that it is their duty to create new things—out of nothing, perhaps—and without the help of anyone except the janitor. They will find the way.

Who knows where there may be lurking another nylon—or rayon—or some form of synthetic rubber. The chemist is in his youth—literally.

Send out the call. Encourage genius. Stimulate the imagination of every boy in college—every laboratory technician—every adult scientist to find something new—something great—something trivial. Something that will make some one better pleased with his lot. And be sure that people understand it is not unpatriotic to buy it. It is buying that keeps money in circulation—that creates taxable wealth.

Some machinery must be available to produce these new things. Governmental departments must cooperate more closely in granting priorities for what is essential to the civilian economy.

The distribution of great sums on war contracts and the subsequent taxing of profit is not enough. Payment of high wages and subsequent subtraction in taxes and enforced saving are not enough. Such dollars are taxable only once, unless they are set in circulation in the channels of consumer trade.

### Must Trade To Pay

NO ONE wants even to think in terms of "business as usual." No one even expects to buy a pound of butter or a roast of beef as before. If necessary, and all believe it necessary, we can get along beautifully with oleomargarine, meat substitutes, a suit of overalls and last year's hat. Those things are not important.

But, if we are to be the Arsenal of the United Nations—and if we are to pay, for the present at least, for all the munitions which we are supplying, our sources of wealth must be enlarged—not curtailed.

The maintenance of commerce in the United States is essential to that creation of wealth.

It is important, therefore, that government help set in motion the development of every form of manufacture that can possibly provide consumer goods without interfering with the efficiency of the war-production program.

Victory will be achieved because it is the will of the people of America to win this war. Just as it is possible to perfect the organization for military victory—it is likewise within the realm of American ingenuity to find the way for preservation of our economy. It is a challenge to every American!

**"Take Her Away..  
UNCLE SAM"**




● When the Chief Test Driver here at Ward LaFrance turns one of our whopping big ten-ton Tank-Recovery Wrecker units over to the Army, he *knows* it's good. One of the biggest things on wheels in any army, this wrecker has to go places trucks never went before—because it's built to recover disabled tanks.

Before the Army inspector tests these babies, Ward LaFrance puts them through gruelling paces that would exceed the endurance of less sturdy brutes. This before-delivery test under full load is unique with Ward LaFrance... typical of the way we do things here.

When the war ends and you want a tough truck built for a special job, just check the performance of these Ward LaFrance heavy wreckers. Records are being made right now under the worst possible conditions, all over the world.

**WARD LAFRANCE TRUCK DIVISION**



ELMIRA, NEW YORK

**Ward LaFrance**



# Customers Are Good Soldiers!

By FRANK FANNON

As told to Larston D. Farrar

**M**Y TWO brothers and I run a retail coal and fuel oil business, or, more correctly, it has been "running" us lately.

Like millions of little businessmen, we haven't time to get philosophical about things, or to be planning how to change society around to suit our purpose.

But like most businessmen, back when the Japs struck Pearl Harbor we wanted to do our part in every possible way. We didn't get out and shout this, but day by day, we just pulled in our belts and determined to meet any conditions that arose. We knew that somebody had to keep life going in our town and every other town.

We live in Alexandria, Va., a typical small town, except that it's close to Washington, D. C.—too close for comfort, if air-raids start. Not so close, however, that we depended on Washington to run our business. We know that the best you can get out of Government are instructions on what *not* to do; seldom, if ever, what to do to help *build* a business.



LOHR

Here's an orchid from a businessman to those whose sportsmanship made a hard job easier

## Story Behind the Story . . .

**Typically American** is the saga of Thomas J. Fannon & Sons, coal and fuel oil dealers of Alexandria, Va., operated by three brothers—Francis Harper (Frank), Chester W. (Ches) and Howard Oscar (Oss) Fannon.

The firm was begun in 1885 when Thomas J. Fannon borrowed \$300 and started a corner grocery. Hale and hearty at 83, Tom Fannon recalls that he paid back that \$300 on time and says it's a family trait to meet bills when due.

Another family trait is changing to meet new conditions. When Tom Fannon saw that chain stores might threaten his corner grocery, he started selling coal in sacks. Later, he bought the lot across the street, sold coal by tons, finally going into the coal business altogether.

Tom Fannon retired in 1930, telling the boys: "Well, here it is." They loved the coal business, but when fuel oil "came in," they converted again, sinking a lot of capital in storage facilities although only few folks used fuel oil.

When the National Defense Program got under way, business was good and getting better but when they saw the camp construction around Alexandria, they branched out and sold building materials to Uncle Sam, getting such a reputation that Army colonels used to call Fannon's when they couldn't find needed materials elsewhere.

Typical was the time a colonel called and said: "We need 100 pounds of feathers—can you get them?"

"Sure thing," Frank replied, although he had never bought or sold a feather in his life. But he finally found the feathers at a rabbi's home.

"I sold them for \$10, which paid me for the time I spent hunting," he recalls.

Back in the summer of '42, we wondered how our customers were going to react to the sacrifices that lay ahead. O.P.A. had prohibited the sale of any fuel oil and we were busy stocking up cellars with coal. We knew, just as our customers did, that difficult days were coming because, of our 3,000 fuel oil customers, only a few could convert to coal furnaces, due to priorities and other difficulties, and few of the homes with fuel oil heaters had fireplaces or stoves for temporary coal heat. That summer was like a quiet before a storm—we all knew we were in for something big, but never dreamed it would hit like it did.

Along in September, O.P.A. announced that coupons for the first period could be used on and after Sept. 15, 1942. Mind you, not one teaspoonful of fuel oil had been sold—on O.P.A. order—since May 30.

Well, when Sept. 15 arrived, pandemonium did, too. For exactly 121

days—until January 14, 1943—we boys and our 3,000 customers all suffered. It wasn't a suffering that comes from being put under a whip. It was just a slow, unspectacular suffering, brought on by frustration, bitter cold, long fruitless waiting, "ration board blues," and a hundred-and-one other irritations.

For ourselves, it was hell because we worked as we had never worked before. At 7 o'clock every morning, we were at our place of business, and until late at night. It was a case of being "Johnny-on-the-spot," excuse-maker extraordinary, diplomat, book-keeper, telephone girl and common laborer combined. After we left the office many nights, we were called back, because we had given all our suppliers word that Fannon would take a tank-car of oil or a car of coal at any time of the day or night.

On Sept. 15, 1942, we had 161,000 gallons of fuel oil in our storage tanks. Our sole competitor in Alexan-





## WHAT IS A NUT?

A nut is a fastening.

Its purpose is to hold things together.

If it loosens, breaks or slips under strain, stress or vibration, it fails in its purpose.

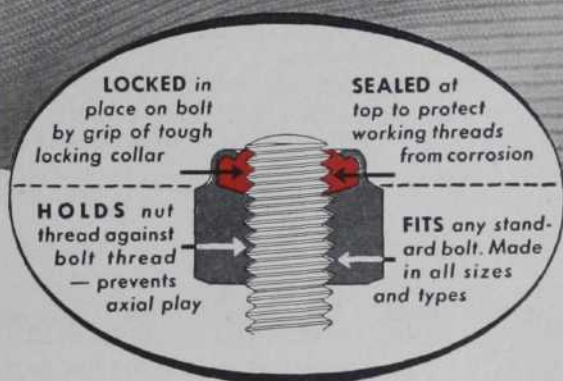
But here is a nut which has never failed in service.

It holds tight, even when re-

moved and put back many times.

We have made billions of these Elastic Stop Nuts. We do not know of one that has fallen down in its job.

We do not believe that statement can be made about any other nut.



## ELASTIC STOP NUTS

*Lock fast to make things last*



ELASTIC STOP NUT CORPORATION OF AMERICA  
UNION, NEW JERSEY



**POWER MOWERS** take a beating from vibration — but Elastic Stop Nuts have already shown they can hold their own in such uses.



**ON ELECTRIC SHAVERS**, Elastic Stop Nuts will hold with a tight grip in spite of constant vibration.



**PACKAGING MACHINERY** stays steadily on the job with fewer halts for servicing with tight-gripping Elastic Stop Nuts at important connections.



Bike stands rattle until they fall off. When they're fastened with Elastic Stop Nuts, they won't.



When regular nuts loosen, cars squeak. So look ahead to quieter automobiles after victory is won.





**With  
Diesel Engines  
in your  
front yard—**

## QUIET EXHAUSTS are important . . . .

Quiet, Snubber-equipped exhausts are found on engines all over the country. You'll find them installed in such places as:

- Miami, Fla., office bldg.
- New York, N. Y., hospital
- Chicago envelope company
- Los Angeles hospital
- Long Island restaurant
- Jefferson, Mo., dairy

You don't notice Snubber-equipped exhausts because absence of noise makes them inconspicuous. When Burgess Snubbers are again available for general use, they may make it possible for you to solve the problem of installing Diesel power in some location where the nuisance of exhaust noise cannot be tolerated.

Diesel engines sometimes have to operate as close to homes as the ones above. When they do, quiet exhausts are extremely important. How would you like to sleep next door to three engines with their cut-outs open?

You'll find Burgess Snubbers in many such critical jobs because they prevent exhaust noise by eliminating the cause. They make possible the use of Diesel power in such locations as hospitals, office buildings, and industrial plants. Burgess Battery Company, Acoustic Division, 2823-F West Roscoe Street, Chicago, Illinois.

Originators of Snubbing Principle for Quieting Diesel Exhausts

# BURGESS DIESEL EXHAUST SNUBBERS

THE *Carlton*

RATES FROM \$6

16TH & K • WASHINGTON, D. C.

## PACIFIC GAS AND ELECTRIC CO.

### DIVIDEND NOTICE

#### Common Stock Dividend No. 109

A cash dividend declared by the Board of Directors on March 17, 1943, for the quarter ending March 31, 1943, equal to 2% of its par value, will be paid upon the Common Capital Stock of this Company by check on April 15, 1943, to shareholders of record at the close of business on March 31, 1943. The Transfer Books will not be closed.

E. J. BECKETT, Treasurer

San Francisco, California

dria had only a few truckfuls, since he has no storage facilities of his own. Through no fault of his he was empty in two days—so his customers came to us.

We were empty in about two weeks. And from then until the middle of January, we were in a hot spot half the time. Two days out of the week, we were entirely out of fuel oil. Four days, we had oil enough for 100 customers, but we had at least 500 would-be customers!

People were camping on our doorsteps wanting sacks of coal, but we had no burlap bags. Our coal drivers could haul just so much a day before they stopped of exhaustion, and when a customer could get us on the telephone, we could only take his order—not promise a definite delivery.

Right here I'd like to pay tribute to my customers—not just one or two of them, but all of them. We've always had some particularly good customers ever since we've been in business—like Harry H. Woodring, former Secretary of War, who used to come by personally and pay his bill in full every month.

But now I'm talking about *all* my customers—from the hitherto grouchy railroad engineer who has been getting in our hair for years to the rich old couple who used to be so grumpy we wondered why we fooled with servicing them.

### Cold but smiling

DURING the 121 days, they were perfectly grand.

I am thinking of an elderly couple who have been used to the finer things all their lives. During those 121 days, this couple would come by and say:

"Mr. Fannon, our oil is down to three inches. We are cold up there. The 'flu is getting closer. The house stays at around 50 degrees all day, but we wear our coats and put on thick sweaters. But, if you can, send us some oil. We need it badly."

They could easily have said:

"We have spent thousands of dollars with you in the past. You are selling oil to customers whom you have never seen before. We demand that you fill up our tanks first."

I am thinking, too, of an old Greek fellow, George Popageorge, who runs a hot-dog stand in Alexandria and rents part of a house. The landlord inadvertently failed to register for fuel oil and Popageorge's house was cold.

He asked our help. We told him we could advance him some oil, but that he must promise to get the coupons from the ration board, many miles away. He promised. So far as we could, we kept Popageorge in oil. He was grateful, but he could never get the coupons. Finally, we told him he must.

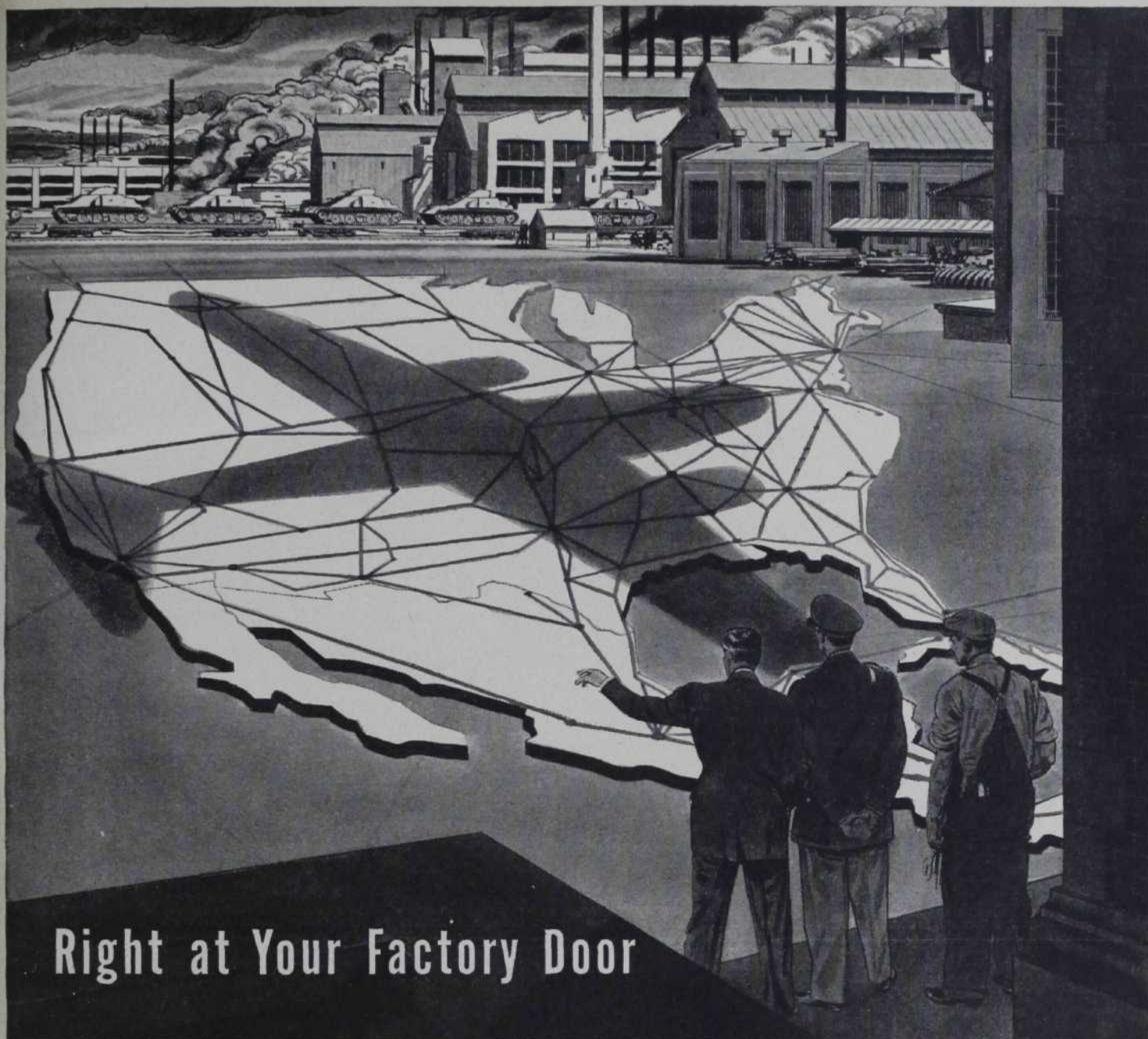
One day, he came in smiling. "I have the coupons . . ." he said gladly.

Then he learned that he owed us 730 coupons, but had only 550. I thought he would weep in my office.

Later, I'm glad to say, he got even with us.

These are only a few of the hundreds of incidents that proved to us that the American spirit will not die, no matter what they say or do over across the Potomac. And I do not even think that our experience was unusual. Every busi-





## Right at Your Factory Door

**W**HEN the Japs struck at Pearl Harbor, the Air Express system of the United States was by far the greatest in the world.

Built during years of peace, it required no conversion for war. It was *ready to go!*

Now, as then, Air Express provides industry with a vast network of skyways over which to move critical material at a speed of three miles a minute.

For the manufacturer, it's almost like

having the entire nation right at his factory door—no supplier or sub-contractor can be far away with this fastest form of delivery.

It serves every U. S. industrial town and city, and more than 60 foreign countries—either direct or by rapid Air-Rail connections, with schedules that are figured in hours instead of days and weeks.

It gains millions of work-hours for thousands of war plants, with vital shipments

that prevent production tie-ups, break industrial bottlenecks and keep men on the job.

**TODAY**, Air Express also works hand in hand with the Army and Navy Air Transport services, to supply our fighting fronts throughout the world.

**TOMORROW**, Air Express will girdle the globe in friendly commerce, and will bring *all* foreign markets to the doorstep of American business.

### AIR EXPRESS SPEEDS WAR PRODUCTION

**SHIP EARLY**—as soon as shipment is ready—to assure *fastest* delivery. **PACK COMPACTLY**—to conserve valuable space. **ASK** for our "War-time Wall Chart"—an illustrated guide for simplified preparation of Air Express shipments.







**FIVE NEW ANSWERS  
TO YOUR  
Building Problems**

WHATEVER construction or remodeling you may be planning, you can save time, labor, and critical materials by investigating these five new multiple-function products, developed by Celotex for wartime building.

CEMESTO combines exterior and interior finish, plus insulation, in a complete fire-resistant wall unit . . . CELO-SIDING combines sheathing, insulation, and a mineralized exterior surface . . . CELO-ROOF combines sheathing, insulation, and roofing.

WHITE ROCK WALL UNITS, composed of laminated layers of gypsum wall board, are made in two styles—one weather-surfaced for exterior use, the other clear white for interiors. Both are strong, rigid, fire resistant.

Get full details from your Celotex dealer, or write direct to The Celotex Corporation, Chicago.

**CELOTEX**

ROOFING—INSULATING BOARD  
ROCK WOOL—GYPSUM WALLBOARD  
LATH—PLASTER—ACOUSTICAL PRODUCTS



## ON TIME!

We are fully aware of the importance of "time table deliveries" in war production. Many of America's leading manufacturers entrust their precision tool problems to us because they have confidence in the accuracy of our work as well as the promptness of our service.

PRECISION TOOL MAKERS

**THE ELLIOTT**  
*Manufacturing Co.*  
MILFORD, CONNECTICUT

nessman in Alexandria—and I know most of 'em—will say the same thing, that our people are ready for any needed sacrifice.

I have charge of our "customer relations" program and I believe that my insistence on keeping our customers informed as to the problems we have faced has been a great factor in getting through those 121 days so well.

At the height of the crisis, I wrote these words in a bulletin sent to each of the customers:

"Our bulletins frequently have told you about Fannon; now we want to tell you about *you*. You have been really swell during the trying, suffering times of the past. It has been tough on you phoning Alexandria 5700 and unable to get an answer, because all our four phones were ringing when you called. It has been disappointing to have us tell you that all we could do was to list your order, without saying *when* we could reach you (because we didn't know!). It has been tough on you to go through the agony of running completely out of oil, after you had almost numbed yourself with the thermometer at 55 degrees. To add insult to injury, you went to take a bath and then there was no hot water in the spigot. You came to our office for a bushel of coal to hold you over to find that we were unable to provide a burlap sack. It was disappointing to see our truck draw up to your neighbor's house, and after asking our driver if you could be served, to be told that there was not enough oil on the truck to serve the list the driver had in his hand. It was not funny to have 250 gallons of coupons and

to be told that all we could possibly give you was 100 gallons.

"But what did you do? Here's what you did: You kept a stiff upper lip and took the medicine that a vicious war was pouring down your throat!

"Your attitude was a great encouragement to us, who were working under definite handicaps. Your understanding made us perfectly satisfied to eat lunch at 3:45 p.m. and finally to get home around 8:30 at night, too tired and exhausted to read the evening paper . . . and then fall in bed, to get out again when it still looked like midnight to go and unload a car of fuel.

"The more than 3,000 families we serve with fuel oil and coal have been our principal thought. We were the only support you could lean upon, and we are proud to have done our part for patrons who mean a lot to us.

"Doing business is harder than it's ever been; but as long as Fannon patrons continue their wonderful cooperation, business assumes a finer 'public relations' quality. Your attitude inspires us. We gladly accept our responsibility to you . . . and we'll do all we can to serve you faithfully."

Thousands upon thousands of little businessmen, I am thinking, can testify to the basic sportsmanship of the American people—to the never-say-die spirit of customers—to the conclusion that when our boys are covering themselves with glory overseas, they are just extending onto far-flung battlefields the same spirit they have learned at the knees of their parents in America.

## BELLRINGER

### War Production Idea Man . . .



**Norman K. (Stumpy) Stump** works at top speed all day turning out self-sealing fuel tanks for U. S. warplanes, but nights find him leisurely turning out ideas. Result? He is acclaimed as "suggestion champion" at the Goodyear Tire & Rubber Company plants in Akron, where he turned in 23 suggestions, 21 of which were accepted and put to work, last year. Besides rewarding workers for each useable suggestion, the company gives the "suggestion champion" an extra \$25. For, as Stumpy says, "Ideas, as well as hard work, will help America to win the war."



FIRST OF A SERIES



ON THIS THEME\*

**FREEDOM***forges its own weapons\**

WHEN the historians of the future write the story of this war, the part played by industry and labor will take its place as an achievement equalled only by the deeds of our armed forces.

War demands on labor and management change many peacetime concepts of individual freedom. All of us accept that as a temporary expediency. But let us not

confuse the issue. Let us not forget that our America is, and will continue to be, God willing, not only a free land but a land with the highest standard of living in the world. And let us keep clearly in mind that our industrial system, which has given us the good things of life and now sustains us in war, was born of our freedom in the past and depends upon its continuance in the future.

The chief glory of the American industrial system is the private initiative which it fosters. Every company has its instances. Some from our own annals of alloy steels will be told later in this series.

It is a fitting tribute to freedom that these examples of private enterprise, born in liberty of thought and action are now contributing weightily in a war for the salvation of freedom.

*Pioneer producers in America of Stainless Steels. Originator and developer of airplane valve, electrical and special tool steels.*

**ALLEGHENY LUDLUM STEEL CORPORATION**

BRACKENRIDGE, PENNA.

**HELP TO FORGE FREEDOM'S WEAPONS . . . BUY WAR BONDS . . . DO YOUR SHARE**



# Milkweed:

## Industry's New Baby



Farmers get \$50 a ton for pods



PHOTOS BY RUSS MARTIN

Milkweed floss in natural state is lighter than air, warm as wool

ten inventions submitted to the National Inventors' Council.

Getting into operation was no snap to Dr. Berkman. He let 600 contracts to organizations and citizens to pick the milkweed crop in wild lands around Petoskey, which hitherto has been known only as a resort town for hay-fever sufferers. The populace turned out *en masse* to recap the green pod harvest, for which \$50 a ton (dried) was paid.

The Government has taken all the corporation's output for the duration, with the first year being used for testing mainly. Dr. Berkman has constructed and patented three sets of machines to gin the floss and separate the seeds from the pods.

Dr. Berkman believes that oil mills and other industries may spring up as a result of his discoveries. He has invented a bed pillow of milkweed floss for those who are allergic to feather pillows and he can think of dozens of other uses for the components and derivatives of milkweed.

The company, as a matter of fact, already has a contract with a sporting goods manufacturer for 50,000 pounds of milkweed floss to be used in making handballs after the war. The future looks rosy for the milkweed, Petoskey, and Dr. Berkman, of course.

—GRACE V. SHARRITT

IF THE Japs had not prevented the exporting of kapok from Java, the milkweed's sudden rise to industrial status in America might have been long delayed. But kapok was cut off and the United States Navy had to find a substitute—fast.

The Navy knew where to look for floss. It turned to the newly-formed Milkweed Products Development Corporation of Petoskey, Mich., headed by Dr. Morris Berkman, a Russian refugee.

For nine long years, Dr. Berkman delved into the marketing possibilities of products from milkweed, a roadside plant that could be grown in soil worthless for other farm products.

Through his experiments, Dr. Berkman discovered latex in the milky

stalk, but not enough to warrant its development for rubber alone. In these same coarse stalks, he found the base of a new plastic, which could be used in manufacturing women's stockings, insulation wall boarding and paper pulp. He learned that:

The lowly milkweed's seeds contain valuable oil; the pod shells could be used in making lintners for explosives—and the floss had what the Navy needs today, a warm, waterproof inner-lining, embodying the life-preserving qualities of cork, for use in seamen's jackets and flying suits for pilots.

Just 22 ounces of milkweed floss can keep a sailor afloat for 100 hours in salt water. A flying suit in which this floss was used was chosen as one of the



# The **EQUITABLE**

## *Life Assurance Society of the United States*

### REPORTS TO THE PUBLIC

\* \* \*

#### PROTECTING THE FAMILY

\$590,000 A DAY is the rate at which benefits were paid in 1942 by The Equitable. Behind this impressive figure are thousands of human stories of life insurance in action.

A total of \$215,354,000 of Equitable benefits went to families throughout the nation last year. Of this, \$76,526,000 was paid to widows, children and other beneficiaries—holding families together, providing funds for education, clearing homes of mortgage debt, and accomplishing many other cherished purposes. In addition, \$31,762,000 in annuity payments brought comfort and peace of mind to older persons. Equitable policyholders also received \$107,066,000 in matured endowments, dividends and other payments.

The flow of these Equitable dollars is doubly important in wartime be-

cause it helps strengthen the home front, benefiting not only individual families but the communities in which they live.

The Equitable has paid more than five billion dollars in benefits since it was founded 83 years ago.

#### SERVING THE NATION

In direct aid of the war effort, The Equitable purchased \$489,999,000 of U. S. Government securities last year.

Other funds are invested in essential industries helping to win the battle of production, in public utilities, producing power for victory, and in railroads, performing vital transportation service. These assets, while providing family security, are at the same time contributing to the economic stability of the nation.

Because family security helps na-

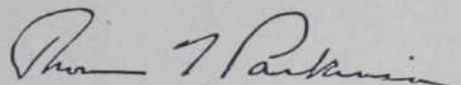
tional morale, it is particularly significant that the life insurance protection provided by The Equitable increased \$359,025,000 in 1942 to \$7,966,328,000.

The premiums paid on life insurance policies represent funds flowing into a useful, permanent channel of thrift, and help the government's efforts to check rising living costs.

It is in the national interest to own life insurance, and if the protection of your family is insufficient, to buy additional life insurance.

\* \* \*

Looking ahead, the one great hope of all Americans is for a speedy conclusion of the war, with victory for a way of living that upholds the dignity and freedom of man. The Equitable is resolved to meet its every responsibility to the nation to help bring this about.



PRESIDENT

#### THE EQUITABLE LIFE ASSURANCE SOCIETY OF THE UNITED STATES

A Mutual Company Incorporated under the Laws of New York State

DECEMBER 31, 1942

#### ASSETS

Cash.....	\$ 58,906,222
*Bonds (incl. \$632,793,697 U. S. Gov't Bonds).....	2,104,542,755
Preferred and Guaranteed Stocks.....	42,976,544
Common Stocks.....	605,815
Mortgage Loans.....	393,320,611
Real Estate.....	101,837,766
Loans on Society's Policies.....	173,799,872
Interest and Rentals Due and Accrued.....	29,483,290
Premiums Receivable and Other Assets.....	27,383,484
Total Admitted Assets.....	\$2,932,856,359

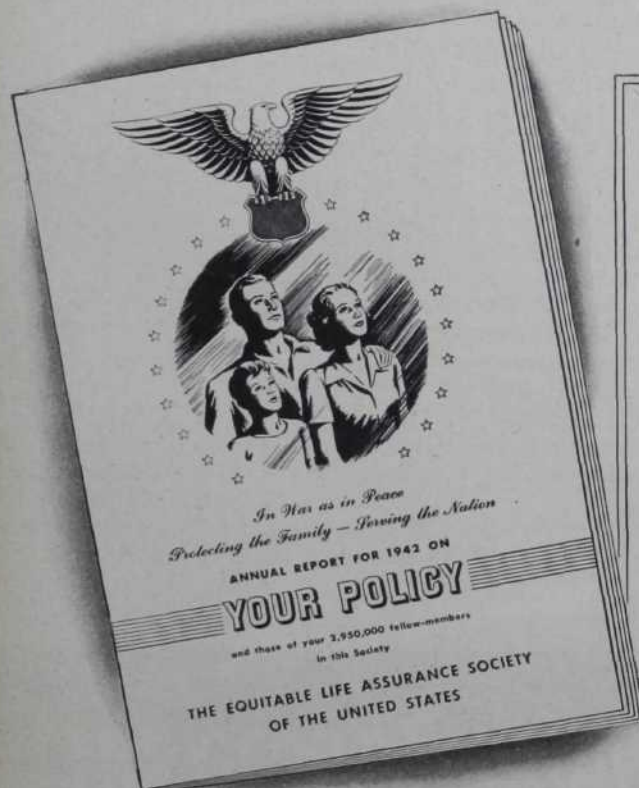
\*Including \$5,795,912 on deposit with public authorities

#### RESERVES, OTHER LIABILITIES AND SURPLUS

Reserves for Policy and Contract Liabilities.....	\$2,715,835,687
Policyholders' Prepaid Premiums.....	25,726,490
Reserve for Taxes.....	7,582,000
Miscellaneous Liabilities.....	9,682,403
1943 Dividend Apportionment.....	36,802,940
Total Reserves and Other Liabilities.....	\$2,795,629,520
Unassigned Funds (Surplus).....	128,904,839
Other Contingency Reserves.....	8,322,000
Total Reserves, Other Liabilities and Surplus.....	\$2,932,856,359

#### A BOOKLET FOR YOU AND YOUR FAMILY

"YOUR POLICY," The Equitable's Annual Report to its Policyholders, is a booklet filled with human-interest stories and illustrations. It also contains practical information for all owners of life insurance. Your copy can be obtained from any Equitable agent, or by writing to the Home Office of The Equitable Life Assurance Society of the United States, 393 Seventh Avenue, New York, N. Y.







## FROM THE FRISCO COUNTRY

From the coal mines, the oil fields, the wheat and cotton fields—Frisco Faster Freight is transporting raw goods to the factories and processing plants throughout the vast Middle West, the Southeast and Southwest. Box, flat and tank cars haul away the finished products, including shipments for armies abroad. Military and industrial shippers know they can depend on Frisco to help "meet the boat," as this great railroad links transcontinental routes, border to border, coast to coast.

*Thru the States of...*

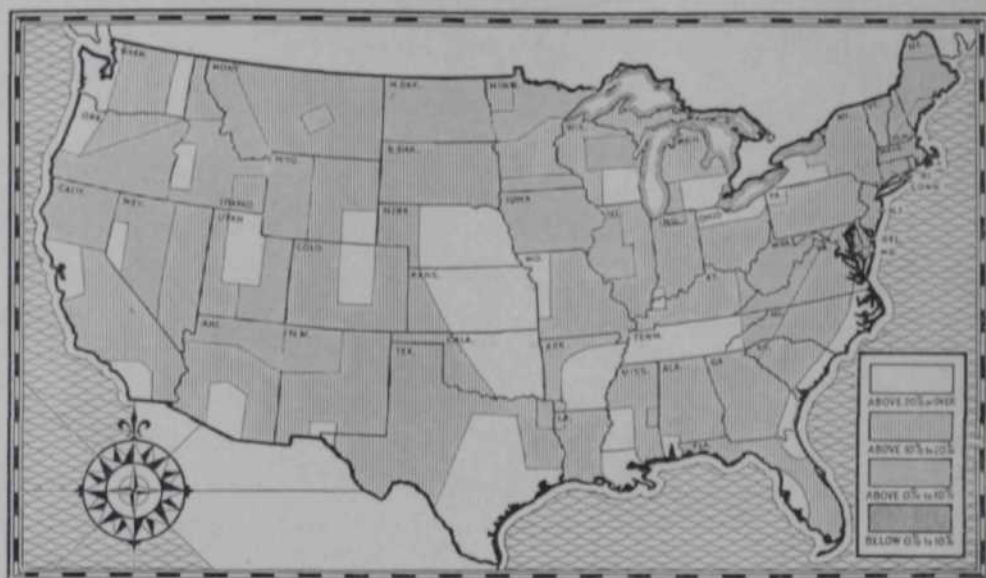
MISSOURI, KANSAS, ARKANSAS,  
OKLAHOMA, TEXAS, TENNESSEE,  
MISSISSIPPI, ALABAMA, FLORIDA.



**A GREAT RAILROAD**

# The *Map* of the Nation's Business

By FRANK GREENE



THE RISING momentum of war production held industrial output at its record level during February. Shipbuilding and airplane production increased sharply and steel mills exceeded weekly records of January. Railroad freight and passenger traffic ran far above last year and weekly electricity output averaged 14.6 per cent above last February. Engineering awards were 35 per cent greater than in January though low compared with 1942.

The East Coast oil crisis passed the critical stage and coal production was largest in years with adoption of the six-day week. Increasing manpower shortages caused heavy labor drains on both war and civilian industry. The wholesale commodity index continued upward, with farm prices, particularly cotton, grains, and livestock reaching new highs for many years.

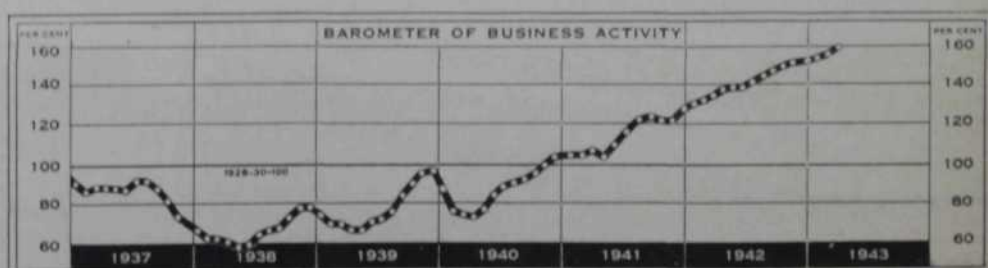
Responding to favorable war news, stock prices went to the highest in 16

Agricultural prosperity, high industrial activity and heavy consumer buying are reflected in the Map.



The map of  
last month

months with transactions heavy. Department store sales rose 31 per cent from last year's high levels in a rush of buying precipitated by fears of possible rationing of clothing and apparel.



Continuing its uninterrupted rise, the Barometer climbed to a new record level in February, reflecting further marked expansion in war production.



# 3 NEW Executive Aids



You are challenged by Donald Nelson's recent statement that "Production goals for 1943 will not be met unless we surpass present production levels." To help you solve three of today's most difficult business problems, the George S. May Business Foundation reports on "Supervisory Training," "Transportation," and "Womanpower."

An almost national lack of well-conducted supervisory programs is indicated by a survey of 15,000 representative companies. Foundation Report No. 134, titled "Industry's Report on Supervisory Training," can be read thoroughly in 15 minutes, to your advantage.

A vital part of our wartime transportation system is the interstate network of trucking lines. Foundation Report No. 135, "New Bottlenecks For Old" is an analysis of a large trucking company. In twelve minutes reading time, it tells you how these transportation problems were solved.

The effective employment of women has become a must industrial problem. In response to many requests we have prepared in Foundation Report No. 136, titled "Womanpower," a comprehensive digest of facts and references on this most timely subject.



Copies of these up-to-the-minute reports are mailed without charge when requested on your business letterhead. A list of preceding reports will also be sent you.

FACTS FOR  
BUSINESS

## THE GEORGE S. MAY BUSINESS FOUNDATION

111 S. Dearborn Street  
CHICAGO

320 Bay Street  
TORONTO

122 E. 42nd Street  
NEW YORK



# The war invention 500 years old



**Have you heard** about our tanks firing "tin cans" at the enemy?

It's an old trick, invented long before Columbus discovered America. The can, filled with deadly steel balls, is fired from a standard 37-mm. tank gun.

And here's what happens: The can (called "Canister") bursts in mid air after traveling maybe 30 yards. It scatters steel slugs in all directions. Masses of enemy ground troops are put out of action by a *single shot!*

How many millions of metal containers are going to war like this?

The number is secret. But you know it must be huge, because you can't get beer cans, coffee cans and certain others for civilian use.

The can, America's favorite container, is racing off production lines to be filled with food, oil and other essential supplies.

It will be knocked around. Dropped from planes to beleaguered forces. Exposed to heat, light, dirt . . . and who knows what else? But no matter. It will get there—*safe*.

And when the can comes marching home, it will be better for the experi-

ence our laboratories and factories have gained as wartime "Packaging Headquarters for America."

## ARE YOU MAKING WAR PRODUCTS?

Metal containers are delivering the goods safely—foods, supplies, and bullets arrive ready for action. Continental is making millions of these cans along with other war needs, including plane parts.

Yet, rushed as we are, we can still take on more! Right now, a part of our vast metal-working facilities for forming, stamping, machining and assembly is still available. Write or phone our War Products Council, 100 East 42nd Street, New York.

*It gets there—safe—in cans*



# CONTINENTAL CAN COMPANY

TO HELP CAN THE AXIS—BUY WAR BONDS